

TABLE 2-17
IDENTIFICATION OF CONSTITUENTS OF INTEREST IN INDOOR AIR
 Clean Harbors Kansas, LLC- Wichita, Kansas

Constituent	Frequency of Detection	Minimum Detected Air Concentration (µg/m³)	Maximum Detected Air Concentration (µg/m³)	Sample with Maximum Detect	Minimum Detection Limit (µg/m³)	Maximum Detection Limit (µg/m³)	USEPA Industrial Air RSL ¹ (µg/m³)	Constituent of Interest	Comment
Volatile Organics									
1,1,1-Trichloroethane	0 / 2	ND	ND	ND	1.1	1.1	2200	No	Constituent not detected.
1,1,2,2-Tetrachloroethane	0 / 2	ND	ND	ND	1.4	1.4	0.21	No	Constituent not detected.
1,1,2-Trichloroethane	0 / 2	ND	ND	ND	1.1	1.1	0.088	No	Constituent not detected.
1,1-Dichloroethane	0 / 2	ND	ND	ND	0.81	0.81	7.7	No	Constituent not detected.
1,1-Dichloroethylene	0 / 2	ND	ND	ND	0.79	0.79	88	No	Constituent not detected.
1,2,4-Trichlorobenzene	0 / 2	ND	ND	ND	1.5	1.5	0.88	No	Constituent not detected.
1,2,4-Trimethylbenzene	1 / 2	18	18	AS2-MAIN	0.98	0.98	3.1	YES	Maximum detect exceeds screening value.
1,2-Dibromoethane	0 / 2	ND	ND	ND	1.5	1.5	0.02	No	Constituent not detected.
1,2-Dichloroethane	0 / 2	ND	ND	ND	0.81	0.81	0.47	No	Constituent not detected.
1,2-Dichloropropane	0 / 2	ND	ND	ND	0.92	0.92	1.2	No	Constituent not detected.
1,3,5-Trimethylbenzene	1 / 2	4.3	4.3	AS2-MAIN	0.98	0.98	NA	No	Screening value not available.
1,3-Butadiene	0 / 2	ND	ND	ND	0.44	0.44	0.41	No	Constituent not detected.
1,4-Dioxane	0 / 2	ND	ND	ND	0.72	0.72	2.5	No	Constituent not detected.
2,2,4-Trimethylpentane	0 / 2	ND	ND	ND	0.93	0.93	NA	No	Constituent not detected.
2-Chlorotoluene	1 / 2	0.88	0.88	AS1-DOWNSTAIRS	1	1	NA	No	Screening value not available.
2-Hexanone	1 / 2	3.2	3.2	AS2-MAIN	0.82	0.82	13	No	Maximum detect below screening value.
3-Chloropropene	0 / 2	ND	ND	ND	0.63	0.63	NA	No	Constituent not detected.
4-Ethyltoluene ²	1 / 2	2	2	AS2-MAIN	0.98	0.98	4.9	No	Maximum detect below screening value.
Acetone	2 / 2	105	266	AS2-MAIN	--	--	14000	No	Maximum detect below screening value.
Benzene	2 / 2	0.38	0.48	AS2-MAIN	--	--	1.60	No	Maximum detect below screening value.
Benzyl Chloride	0 / 2	ND	ND	ND	1	1	0.25	No	Constituent not detected.
Bromodichloromethane	0 / 2	ND	ND	ND	1.3	1.3	0.33	No	Constituent not detected.
Bromoethene	0 / 2	ND	ND	ND	0.87	0.87	NA	No	Constituent not detected.
Bromoform	0 / 2	ND	ND	ND	2.1	2.1	NV	No	Constituent not detected.
Bromomethane	0 / 2	ND	ND	ND	0.78	0.78	2.2	No	Constituent not detected.
Carbon disulfide	0 / 2	ND	ND	ND	0.62	0.62	310	No	Constituent not detected.
Carbon tetrachloride	0 / 2	ND	ND	ND	1.3	1.3	2.044	No	Screening value not available.
Chlorobenzene	0 / 2	ND	ND	ND	0.92	0.92	22	No	Constituent not detected.
Chloroethane	0 / 2	ND	ND	ND	0.53	0.53	4400	No	Constituent not detected.
Chloroform	0 / 2	ND	ND	ND	0.98	0.98	0.53	No	Constituent not detected.
Chloromethane	2 / 2	1.8	2	AS2-MAIN	--	--	39	No	Maximum detect below screening value.
cis-1,2-Dichloroethylene	0 / 2	ND	ND	ND	0.79	0.79	NA	No	Constituent not detected.
cis-1,3-Dichloropropene	0 / 2	ND	ND	ND	0.91	0.91	NA	No	Constituent not detected.
Cyclohexane	1 / 2	0.76	0.76	AS2-MAIN	0.69	0.69	440	No	Maximum detect below screening value.

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Constituent	Frequency of Detection	Minimum Detected Air Concentration (µg/m ³)	Maximum Detected Air Concentration (µg/m ³)	Sample with Maximum Detect	Minimum Detection Limit (µg/m ³)	Maximum Detection Limit (µg/m ³)	USEPA Industrial Air RSL ¹ (µg/m ³)	Constituent of Interest	Comment
Volatile Organics (continued)									
Dibromochloromethane	0 / 2	ND	ND	ND	1.7	1.7	0.45	No	Constituent not detected.
Dichlorodifluoromethane	2 / 2	2.5	2.8	AS1-DOWNSTAIRS	--	--	44	No	Maximum detect below screening value.
Ethanol ³	2 / 2	57.7	90.1	AS2-MAIN	--	--	310	No	Maximum detect below screening value.
Ethyl Acetate	0 / 2	ND	ND	ND	0.72	0.72	31	No	Constituent not detected.
Ethylbenzene	2 / 2	0.43	2.6	AS2-MAIN	--	--	4.9	No	Maximum detect below screening value.
Freon 113	0 / 2	ND	ND	ND	1.5	1.5	13000	No	Constituent not detected.
Freon 114	0 / 2	ND	ND	ND	1.4	1.4	NA	No	Constituent not detected.
Heptane ³	1 / 2	0.61	0.61	AS2-MAIN	0.82	0.82	310	No	Maximum detect below screening value.
Hexachlorobutadiene	0 / 2	ND	ND	ND	2.1	2.1	NV	No	Constituent not detected.
Hexane	0 / 2	ND	ND	ND	0.7	0.7	310	No	Constituent not detected.
Isopropyl Alcohol	2 / 2	4.7	12	AS2-MAIN	--	--	3100	No	Maximum detect below screening value.
m,p-Xylene	2 / 2	1.4	24	AS2-MAIN	--	--	44	No	Maximum detect below screening value.
m-Dichlorobenzene	0 / 2	ND	ND	ND	1.2	1.2	NA	No	Constituent not detected.
Methyl ethyl ketone	2 / 2	5	29	AS2-MAIN	--	--	2200	No	Maximum detect below screening value.
Methyl Isobutyl Ketone	2 / 2	1.6	4.5	AS2-MAIN	--	--	1300	No	Maximum detect below screening value.
Methyl Tert Butyl Ether	0 / 2	ND	ND	ND	0.72	0.72	47	No	Constituent not detected.
Methylene chloride	2 / 2	3	3.5	AS1-DOWNSTAIRS	--	--	260	No	Maximum detect below screening value.
Methylmethacrylate	0 / 2	ND	ND	ND	0.82	0.82	310	No	Constituent not detected.
o-Dichlorobenzene	0 / 2	ND	ND	ND	1.2	1.2	88	No	Constituent not detected.
o-Xylene	2 / 2	0.61	5.2	AS2-MAIN	--	--	44	No	Maximum detect below screening value.
p-Dichlorobenzene	0 / 2	ND	ND	ND	1.2	1.2	1.1	No	Constituent not detected.
Propylene	0 / 2	ND	ND	ND	0.86	0.86	1300	No	Constituent not detected.
Styrene	1 / 2	0.81	0.81	AS2-MAIN	0.85	0.85	440	No	Maximum detect below screening value.
Tertiary Butyl Alcohol ⁴	1 / 2	1.9	1.9	AS2-MAIN	0.61	0.61	13000	No	Maximum detect below screening value.
Tetrachloroethylene	2 / 2	0.6	1.1	AS2-MAIN	--	--	18	No	Maximum detect below screening value.
Tetrahydrofuran	2 / 2	1.7	5	AS1-DOWNSTAIRS	--	--	880	No	Maximum detect below screening value.
Toluene	2 / 2	2.6	5.3	AS2-MAIN	--	--	2200	No	Maximum detect below screening value.
trans-1,2-Dichloroethylene	0 / 2	ND	ND	ND	0.79	0.79	26	No	Constituent not detected.
trans-1,3-Dichloropropene	0 / 2	ND	ND	ND	0.91	0.91	3.1	No	Constituent not detected.
Trichloroethylene	0 / 2	ND	ND	ND	0.21	0.21	0.88	No	Constituent not detected.
Trichlorofluoromethane	2 / 2	1.3	1.5	AS1-DOWNSTAIRS	--	--	310	No	Maximum detect below screening value.
Vinyl Acetate	0 / 2	ND	ND	ND	0.7	0.7	88	No	Constituent not detected.

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Constituent	Frequency of Detection	Minimum Detected Air Concentration (µg/m³)	Maximum Detected Air Concentration (µg/m³)	Sample with Maximum Detect	Minimum Detection Limit (µg/m³)	Maximum Detection Limit (µg/m³)	USEPA Industrial Air RSL ¹ (µg/m³)	Constituent of Interest	Comment
Volatile Organics (continued)									
Vinyl chloride	0 / 2	ND	ND	ND	0.51	0.51	2.8	No	Constituent not detected.
Xylenes (total)	2 / 2	2	30	AS2-MAIN	--	--	44	No	Maximum detect below screening value.

Notes:

Values in bold indicate detection limit exceeds screening level.

"- "- Constituent detected in every sample; detection limit not presented.

NA- Screening vales not available because no inhalation toxicity values are available.

ND- Not Detected

¹ Screening levels are the USEPA Industrial Air Regional Screening Levels (RSL; USEPA, 2013a). Non-cancer based screening levels reflect a hazard quotient of 0.1.

² The screening value for 4-ethyltoluene is based on the value for ethylbenzene.

³ The screening values for ethanol and n-heptane are based on the value for n-hexane.

⁴ The screening value for tertiary butyl alcohol is based on the value for sec-butyl alcohol.

TABLE 2-18
IDENTIFICATION OF CONSTITUENTS OF INTEREST IN SEDIMENT
 Clean Harbors Kansas, LLC- Wichita, Kansas

Constituent	Frequency of Detection	Minimum Detected Sediment Concentration (mg/kg)	Maximum Detected Sediment Concentration (mg/kg)	Sample with Maximum Detect	Minimum Detection Limit (mg/kg)	Maximum Detection Limit (mg/kg)	USEPA Residential Soil RSL ¹ (mg/kg)	Constituent of Interest	Comment
Semi-volatile Organics									
1,2,4-Trichlorobenzene	0 / 11	ND	ND	ND	0.19	0.23	6.2	No	Constituent not detected.
1,2-Dichlorobenzene	0 / 11	ND	ND	ND	0.19	0.23	190	No	Constituent not detected.
1,2-Diphenylhydrazine	0 / 11	ND	ND	ND	0.19	0.23	0.61	No	Constituent not detected.
1,3-Dichlorobenzene	0 / 11	ND	ND	ND	0.19	0.23	NA	No	Constituent not detected.
1,4-Dichlorobenzene	0 / 11	ND	ND	ND	0.19	0.23	2.4	No	Constituent not detected.
1-Methylnaphthalene	0 / 11	ND	ND	ND	0.19	0.23	16	No	Constituent not detected.
2,4,5-Trichlorophenol	0 / 11	ND	ND	ND	0.19	0.23	610	No	Constituent not detected.
2,4,6-Trichlorophenol	0 / 11	ND	ND	ND	0.19	0.23	6.1	No	Constituent not detected.
2,4-Dichlorophenol	0 / 11	ND	ND	ND	0.19	0.23	18	No	Constituent not detected.
2,4-Dimethylphenol	0 / 11	ND	ND	ND	0.19	0.23	120	No	Constituent not detected.
2,4-Dinitrophenol	0 / 11	ND	ND	ND	0.97	1.1	12	No	Constituent not detected.
2,4-Dinitrotoluene	0 / 11	ND	ND	ND	0.19	0.23	1.6	No	Constituent not detected.
2,6-Dinitrotoluene	0 / 11	ND	ND	ND	0.19	0.23	0.33	No	Constituent not detected.
2-Chloronaphthalene	0 / 11	ND	ND	ND	0.19	0.23	630	No	Constituent not detected.
2-Chlorophenol	0 / 11	ND	ND	ND	0.19	0.23	39	No	Constituent not detected.
2-Methylnaphthalene	0 / 11	ND	ND	ND	0.19	0.23	23	No	Constituent not detected.
2-Methylphenol	0 / 11	ND	ND	ND	0.19	0.23	310	No	Constituent not detected.
2-Nitroaniline	0 / 11	ND	ND	ND	0.19	0.23	61	No	Constituent not detected.
2-Nitrophenol	0 / 11	ND	ND	ND	0.19	0.23	NA	No	Constituent not detected.
3&4-Methylphenol	0 / 11	ND	ND	ND	0.19	0.23	610	No	Constituent not detected.
3,3'-Dichlorobenzidine	0 / 11	ND	ND	ND	0.19	0.23	1.1	No	Constituent not detected.
3-Nitroaniline	0 / 11	ND	ND	ND	0.19	0.23	NA	No	Constituent not detected.
4,6-Dinitro-o-cresol	0 / 11	ND	ND	ND	0.39	0.46	0.49	No	Constituent not detected.
4-Bromophenyl phenyl ether	0 / 11	ND	ND	ND	0.19	0.23	NA	No	Constituent not detected.
4-Chloro-3-methyl phenol	0 / 11	ND	ND	ND	0.19	0.23	610	No	Constituent not detected.
4-Chloroaniline	0 / 11	ND	ND	ND	0.19	0.23	2.4	No	Constituent not detected.
4-Chlorophenyl phenyl ether	0 / 11	ND	ND	ND	0.19	0.23	NA	No	Constituent not detected.
4-Nitroaniline	0 / 11	ND	ND	ND	0.19	0.23	24	No	Constituent not detected.
4-Nitrophenol	0 / 11	ND	ND	ND	0.97	1.1	NA	No	Constituent not detected.
Acenaphthene	1 / 11	0.033	0.033	CC-9	0.19	0.23	340	No	Maximum detect below screening value.
Acenaphthylene	0 / 11	ND	ND	ND	0.19	0.23	NA	No	Constituent not detected.
Aniline	0 / 11	ND	ND	ND	0.19	0.23	43	No	Constituent not detected.
Anthracene	1 / 11	0.0264	0.0264	CC-9	0.19	0.23	1700	No	Maximum detect below screening value.
Benzidine	0 / 11	ND	ND	ND	1.9	2.3	0.0005	No	Constituent not detected.

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Clean Harbors Kansas, LLC- Wichita, Kansas

Constituent	Frequency of Detection	Minimum Detected Sediment Concentration (mg/kg)	Maximum Detected Sediment Concentration (mg/kg)	Sample with Maximum Detect	Minimum Detection Limit (mg/kg)	Maximum Detection Limit (mg/kg)	USEPA Residential Soil RSL ¹ (mg/kg)	Constituent of Interest	Comment
Semi-volatile Organics (continued)									
Benzo(a)anthracene	1 / 11	0.032	0.032	CC-10	0.19	0.21	0.15	No	Maximum detect below screening value.
Benzo(a)pyrene	2 / 11	0.036799999	0.061099998	CC-2	0.19	0.21	0.015	YES	Maximum detect exceeds screening value.
Benzo(b)fluoranthene	2 / 11	0.065900002	0.0679	CC-2	0.19	0.21	0.15	No	Maximum detect below screening value.
Benzo(g,h,i)perylene ²	2 / 11	0.065199997	0.089	CC-2	0.19	0.21	170	No	Maximum detect below screening value.
Benzo(k)fluoranthene	1 / 11	0.0296	0.0296	CC-10	0.19	0.21	1.5	No	Maximum detect below screening value.
Benzoic Acid	0 / 11	ND	ND	ND	0.97	1.1	24000	No	Constituent not detected.
Benzyl Alcohol	0 / 11	ND	ND	ND	0.19	0.23	610	No	Constituent not detected.
bis(2-Chloroethoxy)methane	0 / 11	ND	ND	ND	0.19	0.23	18	No	Constituent not detected.
bis(2-Chloroethyl)ether	0 / 11	ND	ND	ND	0.19	0.23	0.21	No	Constituent not detected.
bis(2-Chloroisopropyl)ether	0 / 11	ND	ND	ND	0.19	0.23	4.6	No	Constituent not detected.
bis(2-Ethylhexyl)phthalate	0 / 11	ND	ND	ND	0.39	0.46	35	No	Constituent not detected.
Butyl benzyl phthalate	0 / 11	ND	ND	ND	0.19	0.23	260	No	Constituent not detected.
Carbazole	0 / 11	ND	ND	ND	0.19	0.23	NA	No	Constituent not detected.
Chrysene	2 / 11	0.0501	0.062200001	CC-10	0.19	0.21	15	No	Maximum detect below screening value.
Dibenzo(a,h)anthracene	0 / 11	ND	ND	ND	0.19	0.23	0.015	No	Constituent not detected.
Dibenzofuran	1 / 11	0.0246	0.0246	CC-9	0.19	0.23	7.8	No	Maximum detect below screening value.
Diethyl phthalate	0 / 11	ND	ND	ND	0.39	0.46	4900	No	Constituent not detected.
Dimethyl phthalate	0 / 11	ND	ND	ND	0.19	0.23	NA	No	Constituent not detected.
Di-n-butyl phthalate	0 / 11	ND	ND	ND	0.39	0.46	610	No	Constituent not detected.
Di-n-octyl phthalate	0 / 11	ND	ND	ND	0.19	0.23	61	No	Constituent not detected.
Fluoranthene	2 / 11	0.0224	0.065400002	CC-10	0.19	0.21	230	No	Maximum detect below screening value.
Fluorene	1 / 11	0.060599998	0.060599998	CC-9	0.19	0.23	230	No	Maximum detect below screening value.
Hexachlorobenzene	0 / 11	ND	ND	ND	0.19	0.23	0.3	No	Constituent not detected.
Hexachlorobutadiene	0 / 11	ND	ND	ND	0.19	0.23	6.1	No	Constituent not detected.
Hexachlorocyclopentadiene	0 / 11	ND	ND	ND	0.19	0.23	37	No	Constituent not detected.
Hexachloroethane	0 / 11	ND	ND	ND	0.19	0.23	4.3	No	Constituent not detected.
Indeno(1,2,3-cd)pyrene	1 / 11	0.040900002	0.040900002	CC-10	0.19	0.21	0.15	No	Maximum detect below screening value.
Isophorone	0 / 11	ND	ND	ND	0.19	0.23	510	No	Constituent not detected.
Naphthalene	0 / 11	ND	ND	ND	0.19	0.23	3.6	No	Constituent not detected.
Nitrobenzene	0 / 11	ND	ND	ND	0.19	0.23	4.8	No	Constituent not detected.
N-Nitrosodimethylamine	0 / 11	ND	ND	ND	0.39	0.46	0.0023	No	Constituent not detected.
N-Nitroso-di-n-propylamine	0 / 11	ND	ND	ND	0.19	0.23	0.069	No	Constituent not detected.
N-Nitrosodiphenylamine	0 / 11	ND	ND	ND	0.19	0.23	99	No	Constituent not detected.
Pentachlorophenol	0 / 11	ND	ND	ND	0.97	1.1	0.89	No	Constituent not detected.

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Constituent	Frequency of Detection	Minimum Detected Sediment Concentration (mg/kg)	Maximum Detected Sediment Concentration (mg/kg)	Sample with Maximum Detect	Minimum Detection Limit (mg/kg)	Maximum Detection Limit (mg/kg)	USEPA Residential Soil RSL ¹ (mg/kg)	Constituent of Interest	Comment
Semi-volatile Organics (continued)									
Phenanthrene ³	1 / 11	0.0269	0.0269	CC-10	0.19	0.21	1700	No	Maximum detect below screening value.
Phenol	0 / 11	ND	ND	ND	0.19	0.23	1800	No	Constituent not detected.
Pyrene	3 / 11	0.0235	0.057200001	CC-10	0.19	0.21	170	No	Maximum detect below screening value.
Pyridine	0 / 11	ND	ND	ND	0.39	0.46	7.8	No	Constituent not detected.
Toxaphene	0 / 11	ND	ND	ND	0.097	0.11	0.44	No	Constituent not detected.
Metals (Total)									
Arsenic	11 / 11	2.3	13.4	CC-3	--	--	0.61	YES	Maximum detect exceeds screening value.
Barium	11 / 11	36.200001	238	CC-5	--	--	1500	No	Maximum detect below screening value.
Cadmium	1 / 11	0.35	0.35	CC-8	0.18	0.84	7	No	Maximum detect below screening value.
Chromium ⁴	11 / 11	2	11	CC-10	--	--	10286	No	Maximum detect below screening value.
Lead	11 / 11	5.3	3320	CC-8	--	--	400	YES	Maximum detect exceeds screening value.
Mercury	0 / 11	ND	ND	ND	0.043	0.051	1	No	Constituent not detected.
Selenium	0 / 11	ND	ND	ND	0.89	4.2	39	No	Constituent not detected.
Silver	0 / 11	ND	ND	ND	0.39	0.9	39	No	Constituent not detected.

Notes:

Values in bold indicate detection limit exceeds screening level.

"- ." Constituent detected in every sample; detection limit not presented.

NA- Not Available

ND- Not Detected

¹ Screening levels are the USEPA Residential Soil Regional Screening Level (RSL; USEPA, 2013a). Non-cancer based screening levels reflect a hazard quotient of 0.1.

² The screening value for benzo(g,h,i)perylene is based on the value for pyrene.

³ The screening value for phenanthrene is based on the value for anthracene.

⁴ Site-specific residential soil RSL for total chromium is based on the assumption that hexavalent and trivalent chromium are present at a ratio of 1:6 (Cr IV to Cr III). See text Section 2.4.4.

TABLE 2-19
IDENTIFICATION OF CONSTITUENTS OF INTEREST IN SURFACE WATER
Clean Harbors Kansas, LLC- Wichita, Kansas

Constituent	Frequency of Detection	Minimum Detected Surface Water Concentration (µg/L)	Maximum Detected Surface Water Concentration (µg/L)	Sample with Maximum Detect	Minimum Detection Limit (µg/L)	Maximum Detection Limit (µg/L)	Surface Water Screening Value ¹ (ug/L)	Constituent of Interest ³	Comment
Volatile Organics									
1,1,1,2-Tetrachloroethane*	0 / 10	ND	ND	ND	1	1	0.5	No	Constituent not detected.
1,1,1-Trichloroethane	0 / 10	ND	ND	ND	1	1	200	No	Constituent not detected.
1,1,2,2-Tetrachloroethane*	0 / 10	ND	ND	ND	1	1	0.066	No	Constituent not detected.
1,1,2-Trichloroethane*	0 / 10	ND	ND	ND	1	1	0.041	No	Constituent not detected.
1,1-Dichloroethane*	0 / 10	ND	ND	ND	1	1	2.4	No	Constituent not detected.
1,1-Dichloroethylene*	0 / 10	ND	ND	ND	1	1	26	No	Constituent not detected.
1,1-Dichloropropene*	0 / 10	ND	ND	ND	1	1	NA	No	Constituent not detected.
1,2,3-Trichlorobenzene*	0 / 10	ND	ND	ND	1	1	0.52	No	Constituent not detected.
1,2,3-Trichloropropane*	0 / 10	ND	ND	ND	2	2	0.00065	No	Constituent not detected.
1,2,4-Trichlorobenzene	0 / 10	ND	ND	ND	1	1	260	No	Constituent not detected.
1,2,4-Trimethylbenzene*	0 / 10	ND	ND	ND	2	2	1.5	No	Constituent not detected.
1,2-Dibromo-3-chloropropane	0 / 10	ND	ND	ND	2	2	0.2	No	Constituent not detected.
1,2-Dibromoethane	0 / 10	ND	ND	ND	1	1	0.05	No	Constituent not detected.
1,2-Dichloroethane*	0 / 10	ND	ND	ND	1	1	0.15	No	Constituent not detected.
cis-1,2-Dichloroethylene	4 / 10	0.52	3	SR-SW-1	1	1	70	No	Maximum detect below screening value.
trans-1,2-Dichloroethylene	0 / 10	ND	ND	ND	1	1	100	No	Constituent not detected.
1,2-Dichloropropane*	0 / 10	ND	ND	ND	1	1	0.38	No	Constituent not detected.
1,3,5-Trimethylbenzene*	0 / 10	ND	ND	ND	2	2	8.7	No	Constituent not detected.
1,3-Dichloropropane*	0 / 10	ND	ND	ND	1	1	29	No	Constituent not detected.
cis-1,3-Dichloropropene	0 / 10	ND	ND	ND	1	1	NA	No	Constituent not detected.
trans-1,3-Dichloropropene	0 / 10	ND	ND	ND	1	1	NA	No	Constituent not detected.
1,4-Dioxane*	0 / 10	ND	ND	ND	200	200	0.67	No	Constituent not detected.
2,2-Dichloropropane	0 / 10	ND	ND	ND	1	1	NA	No	Constituent not detected.
2-Chloroethyl vinyl ether	0 / 10	ND	ND	ND	5	5	NA	No	Constituent not detected.
2-Hexanone*	0 / 10	ND	ND	ND	10	10	3.4	No	Constituent not detected.
4-Methyl-2-pentanone*	0 / 10	ND	ND	ND	5	5	100	No	Constituent not detected.
Acetone*	0 / 10	ND	ND	ND	25	25	1200	No	Constituent not detected.
Acrolein	0 / 10	ND	ND	ND	20	20	190	No	Constituent not detected.
Acrylonitrile*	0 / 10	ND	ND	ND	10	10	0.045	No	Constituent not detected.
Benzene	1 / 10	2.2	2.2	SR-SW-1	1	1	5	No	Maximum detect below screening value.
Bromobenzene*	0 / 10	ND	ND	ND	1	1	5.4	No	Constituent not detected.
Bromochloromethane*	0 / 10	ND	ND	ND	1	1	8.3	No	Constituent not detected.
Bromodichloromethane*	0 / 10	ND	ND	ND	1	1	0.12	No	Constituent not detected.

TABLE 2-19
IDENTIFICATION OF CONSTITUENTS OF INTEREST IN SURFACE WATER
 Clean Harbors Kansas, LLC- Wichita, Kansas

Constituent	Frequency of Detection	Minimum Detected Surface Water Concentration (µg/L)	Maximum Detected Surface Water Concentration (µg/L)	Sample with Maximum Detect	Minimum Detection Limit (µg/L)	Maximum Detection Limit (µg/L)	Surface Water Screening Value ¹ (ug/L)	Constituent of Interest ³	Comment
Volatiles Organics (continued)									
Bromoform*	0 / 10	ND	ND	ND	1	1	7.9	No	Constituent not detected.
Carbon disulfide*	0 / 10	ND	ND	ND	2	2	72	No	Constituent not detected.
Carbon tetrachloride	0 / 10	ND	ND	ND	1	1	5	No	Constituent not detected.
Chlorobenzene	0 / 10	ND	ND	ND	1	1	130	No	Constituent not detected.
Chloroethane*	0 / 10	ND	ND	ND	2	2	2100	No	Constituent not detected.
Chloroform*	0 / 10	ND	ND	ND	1	1	0.19	No	Constituent not detected.
Dibromochloromethane*	0 / 10	ND	ND	ND	1	1	0.15	No	Constituent not detected.
Dichlorodifluoromethane*	0 / 10	ND	ND	ND	2	2	19	No	Constituent not detected.
Ethylbenzene	1 / 10	0.32	0.32	SR-SW-1	1	1	700	No	Maximum detect below screening value.
Hexachlorobutadiene*	0 / 10	ND	ND	ND	2	2	0.26	No	Constituent not detected.
Isopropylbenzene*	0 / 10	ND	ND	ND	1	1	39	No	Constituent not detected.
m-Dichlorobenzene	0 / 10	ND	ND	ND	1	1	NA	No	Constituent not detected.
Methyl bromide*	0 / 10	ND	ND	ND	2	2	0.7	No	Constituent not detected.
Methyl chloride*	0 / 10	ND	ND	ND	2	2	19	No	Constituent not detected.
Methyl ethyl ketone*	0 / 10	ND	ND	ND	5	5	490	No	Constituent not detected.
Methyl Tert Butyl Ether*	0 / 10	ND	ND	ND	1	1	12	No	Constituent not detected.
Methylene bromide*	0 / 10	ND	ND	ND	2	2	0.79	No	Constituent not detected.
Methylene chloride	0 / 10	ND	ND	ND	5	5	4.7	No	Constituent not detected.
Naphthalene*	0 / 10	ND	ND	ND	3	3	0.14000	No	Constituent not detected.
n-Butylbenzene*	0 / 10	ND	ND	ND	1	1	78	No	Constituent not detected.
n-Propylbenzene*	0 / 10	ND	ND	ND	1	1	53	No	Constituent not detected.
o-Chlorotoluene*	0 / 10	ND	ND	ND	1	1	18	No	Constituent not detected.
o-Dichlorobenzene	0 / 10	ND	ND	ND	1	1	600	No	Constituent not detected.
p-Chlorotoluene*	0 / 10	ND	ND	ND	1	1	19	No	Constituent not detected.
p-Dichlorobenzene	0 / 10	ND	ND	ND	1	1	75	No	Constituent not detected.
p-Isopropyltoluene	0 / 10	ND	ND	ND	1	1	NA	No	Constituent not detected.
sec-Butylbenzene*	0 / 10	ND	ND	ND	1	1	160	No	Constituent not detected.
Styrene	0 / 10	ND	ND	ND	1	1	100	No	Constituent not detected.
tert-Butylbenzene*	0 / 10	ND	ND	ND	1	1	51	No	Constituent not detected.
Tetrachloroethylene	0 / 10	ND	ND	ND	1	1	5	No	Constituent not detected.
Toluene	0 / 10	ND	ND	ND	1	1	1000	No	Constituent not detected.
Trichloroethylene	9 / 10	0.47	3.8	SR-SW-1	1	1	5	No	Maximum detect below screening value.
Trichlorofluoromethane*	0 / 10	ND	ND	ND	2	2	110	No	Constituent not detected.
Vinyl Acetate*	0 / 10	ND	ND	ND	10	10	41	No	Constituent not detected.

TABLE 2-19
IDENTIFICATION OF CONSTITUENTS OF INTEREST IN SURFACE WATER
Clean Harbors Kansas, LLC- Wichita, Kansas

Constituent	Frequency of Detection	Minimum Detected Surface Water Concentration (µg/L)	Maximum Detected Surface Water Concentration (µg/L)	Sample with Maximum Detect	Minimum Detection Limit (µg/L)	Maximum Detection Limit (µg/L)	Surface Water Screening Value ¹ (ug/L)	Constituent of Interest ³	Comment
Volatile Organics (continued)									
Vinyl chloride	0 / 10	ND	ND	ND	1	1	2	No	Constituent not detected.
m,p-Xylene	0 / 10	ND	ND	ND	2	2	10000	No	Constituent not detected.
o-Xylene	0 / 10	ND	ND	ND	1	1	10000	No	Constituent not detected.

Notes:

Values in bold indicate detection limit exceeds screening level.

"- " Constituent detected in every sample; detection limit not presented.

NA- Not Available

ND- Not Detected

¹ Screening levels are the Kansas Department of Health and Environment (KDHE; 2008) Surface Water Quality Standards for Public Health (Domestic Water Supply), unless otherwise noted.

³ In the absence of a KDHE value, screening level for this constituent is based on the USEPA Tapwater Regional Screening Levels (RSL; USEPA, 2013a). Non-cancer based screening levels reflect a hazard quotient of 0.1.

TABLE 2-20
 SUMMARY OF CONSTITUENTS OF INTEREST IN SOIL
 Clean Harbors Kansas, LLC- Wichita, Kansas

RA Area	Pathway	Constituents of Interest	
Western Area	Direct Contact	Tetrachloroethene Trichloroethene	Arsenic
	Migration to Groundwater	1,1-Dichloroethane 1,2,4-Trimethylbenzene 1,4-Dioxane cis-1,2-Dichloroethene Hexachlorobutadiene Tetrachloroethene Total xylenes trans-1,2-Dichloroethene Trichloroethene	Benzo(a)pyrene Hexachlorobenzene Naphthalene Arsenic Cadmium Iron Manganese Mercury Selenium
Central Area	Direct Contact	1,2,4-Trimethylbenzene Ethylbenzene Naphthalene Tetrachloroethene Total xylenes Trichloroethene	Vinyl Chloride* Benzo(a)pyrene mcpp Toxaphene Arsenic Lead
	Migration to Groundwater	1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,2,4-Trimethylbenzene 1,2-Dichloroethene, Total 1,3,5-Trimethylbenzene 1,4-Dioxane 4-Isopropyltoluene Chloroform Cis-1,2-Dichloroethene Ethylbenzene Isopropylbenzene M,P-Xylenes Methylene Chloride Naphthalene N-Butylbenzene N-Propylbenzene O-Xylene Tetrachloroethene Total Xylenes Trans-1,2-Dichloroethene	Trichloroethene Vinyl Chloride 1-Methylnaphthalene Aniline Benzo(a)anthracene Benzo(a)pyrene Di-N-Butyl Phthalate Isophorone Heptachlor epoxide Mcpp Pentachlorophenol Toxaphene Arsenic Barium Cadmium Cobalt Iron Manganese Mercury Selenium Titanium

TABLE 2-20
SUMMARY OF CONSTITUENTS OF INTEREST IN SOIL
 Clean Harbors Kansas, LLC- Wichita, Kansas

RA Area	Pathway	Constituents of Interest	
Eastern Area	Direct Contact	1,2,4-Trimethylbenzene	Trichloroethene
		Ethylbenzene	Vinyl Chloride
		Naphthalene*	Benzo(a)pyrene*
		Tetrachloroethene	Arsenic
		Total Xylenes**	Lead
	Migration to Groundwater	1,1,2-Trichloroethane	Styrene
		1,1-Dichloroethane	Tetrachloroethene
		1,2,4-Trimethylbenzene	Toluene
		1,2-Dichloroethane	Total Xylenes
		1,3,5-Trimethylbenzene	Trichloroethene
		1,4-Dioxane	Vinyl Chloride
		2-Hexanone	Benzo(a)pyrene
		4-Isopropyltoluene	Dalapon
		4-methyl-2-pentanone	Arsenic
		Benzene	Barium
		Cis-1,2-Dichloroethene	Cadmium
		Ethylbenzene	Cobalt
		Isopropylbenzene	Iron
		M,P-Xylenes	Manganese
		Naphthalene	Mercury
		N-Propylbenzene	Selenium
		O-Xylene	Silver
		sec-Butylbenzene	Titanium

Notes:

* Although the maximum detected concentration of this constituent was less than the RSL, the maximum detection limit exceeded the RSL, and the constituent was identified as a COI in other onsite areas. Therefore, this constituent was conservatively retained as a COI for the quantitative assessment.

** Only total xylenes is retained as a soil direct contact COI, as inclusion of m&p- and o-xylenes would double-count results.

TABLE 2-21
SUMMARY OF CONSTITUENTS OF INTEREST IN GROUNDWATER
 Clean Harbors Kansas, LLC- Wichita, Kansas

Area	Pathway	Constituents of Interest	
Onsite and Downgradient	Direct Contact	1,1-Dichloroethane 1,2,4-Trimethylbenzene 1,2-Dichloroethane 1,3,5-Trimethylbenzene Benzene Chloroform Cis-1,2-Dichloroethene Ethylbenzene Isopropylbenzene M,P-Xylenes* Methylene Chloride Naphthalene N-Propylbenzene	O-Xylene Tetrachloroethene Toluene Total Xylenes Trichloroethene Vinyl Chloride 1-Methylnaphthalene Mercury (total) Lead (total) Arsenic (total & dissolved) Barium (total & dissolved) Iron (total & dissolved) Manganese (total & dissolved)
Onsite	Vapor Intrusion	1,1-Dichloroethane Ethylbenzene Tetrachloroethene	Trichloroethene Vinyl chloride
Upgradient (Offsite)	Direct Contact	Benzene Carbon Tetrachloride Chloroform cis-1,2-Dichloroethene	Naphthalene Tetrachloroethene Trichloroethene

TABLE 2-22
SUMMARY OF CONSTITUENTS OF INTEREST IN SOIL GAS AND INDOOR AIR
Clean Harbors Kansas, LLC- Wichita, Kansas

Medium	Pathway	Constituents of Interest
Soil Gas	Vapor Intrusion	<i>None</i>
Indoor Air	Direct Contact	1,2,4-Trimethylbenzene

TABLE 2-23
SUMMARY OF CONSTITUENTS OF INTEREST IN SEDIMENT AND SURFACE WATER
Clean Harbors Kansas, LLC- Wichita, Kansas

Medium	Pathway	Constituents of Interest
Sediment	Direct Contact	Benzo(a)pyrene Arsenic Lead
Surface Water	Direct Contact	<i>None</i>

TABLE 3-1
EXPOSURE POINT CONCENTRATIONS FOR CONSTITUENTS OF INTEREST IN SURFACE SOIL - WESTERN AREA
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituents of Interest	Number of Samples	Percent Non-detect	Maximum Detection (mg/kg)	Arithmetic Mean ¹ (mg/kg)	Distribution	Upper Confidence Limit ¹ (mg/kg)	Exposure Point Concentration ² (mg/kg)
Volatile Organics							
Tetrachloroethene	33	6.1%	109	5.33	Non-parametric	41.4	41.4
Trichloroethene	33	57.6%	31.7	1.36	Lognormal	11.7	11.7
Inorganics							
Arsenic	21	0.0%	170	56.4	Non-parametric	121	121

Notes:

¹ Details of all statistical calculations are provided in Appendix B-1.

² The Exposure Point Concentration (EPC) is the lower of the maximum detected concentration or the Upper Confidence Limit (UCL).

TABLE 3-2
EXPOSURE POINT CONCENTRATIONS FOR CONSTITUENTS OF INTEREST IN SURFACE AND SUBSURFACE SOIL - WESTERN AREA *
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituents of Interest	Number of Samples	Percent Non-detect	Maximum Detection (mg/kg)	Arithmetic Mean ¹ (mg/kg)	Distribution	Upper Confidence Limit ¹ (mg/kg)	Exposure Point Concentration ² (mg/kg)
Volatile Organics							
Tetrachloroethene	99	7.1%	109	1.93	Non-parametric	9.56	9.56
Trichloroethene	99	66.7%	31.7	0.46	Non-parametric	2.61	2.61
Inorganics							
Arsenic	31	0.0%	170.0	39.1	Non-parametric	86.7	86.7

Notes:

* The dataset for the Western Area consists of data for samples collected from a depth of 15 feet or less.

¹ Details of all statistical calculations are provided in Appendix B-1.

² The Exposure Point Concentration (EPC) is the lower of the maximum detected concentration or the Upper Confidence Limit (UCL).

TABLE 3-3
EXPOSURE POINT CONCENTRATIONS FOR CONSTITUENTS OF INTEREST IN SURFACE SOIL - CENTRAL AREA
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituents of Interest	Number of Samples	Percent Non-detect	Maximum Detection (mg/kg)	Arithmetic Mean ¹ (mg/kg)	Distribution	Upper Confidence Limit ¹ (mg/kg)	Exposure Point Concentration ² (mg/kg)
Volatile Organics							
1,2,4-Trimethylbenzene	93	93.6%	0.13	0.0034	Gamma	0.0064	0.0064
Ethylbenzene	93	91.4%	0.0078	0.0018	Gamma	0.0022	0.0022
Naphthalene	93	97.9%	0.011	0.0038	Non-parametric	0.004	0.004
Tetrachloroethene	93	10.8%	308	12.9	Lognormal	37.2	37.2
Total Xylenes	93	88.2%	1.87	0.03	Non-parametric	0.12	0.12
Trichloroethene	93	18.3%	22.5	2.43	Lognormal	5.76	5.76
Vinyl chloride	93	92.5%	0.28	0.0053	Gamma	0.011	0.011
Semi-Volatile Organics							
Benzo(a)pyrene	84	90.5%	0.23	0.04	Gamma	0.055	0.055
Herbicides/Pesticides							
MCPP	66	97.0%	93.5	27.6	Non-parametric	30.1	30.1
Toxaphene	66	98.5%	2.15	NA	NA	NA	2.15
Inorganics							
Arsenic	84	3.6%	176	7.71	Non-parametric	13.6	13.6
Lead ³	84	1.2%	813	52.0	NA	NA	52.0

Notes:

¹ Details of all statistical calculations are provided in Appendix B-2.

² The Exposure Point Concentration (EPC) is the lower of the maximum detected concentration or the Upper Confidence Limit (UCL).

³ The EPC for lead is based on the arithmetic mean; statistics are not applicable.

NA - Statistics not applicable because only one distinct data value was detected.

ND - This constituent was not detected in the surface soil data set.

TABLE 3-4
EXPOSURE POINT CONCENTRATIONS FOR CONSTITUENTS OF INTEREST IN SURFACE AND SUBSURFACE SOIL - CENTRAL AREA *
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituents of Interest	Number of Samples	Percent Non-detect	Maximum Detection (mg/kg)	Arithmetic Mean ¹ (mg/kg)	Distribution	Upper Confidence Limit ¹ (mg/kg)	Exposure Point Concentration ² (mg/kg)
Volatile Organics							
1,2,4-Trimethylbenzene	176	95.5%	1230	7.19	Lognormal	53.7	53.7
Ethylbenzene	176	93.2%	98.7	0.58	Non-parametric	4.23	4.23
Naphthalene	176	96.6%	179	1.02	Non-parametric	7.96	7.96
Tetrachloroethene	176	13.1%	848	12.8	Non-parametric	45.4	45.4
Total Xylenes	176	91.5%	313	1.83	Non-parametric	13.3	13.3
Trichloroethene	176	21.6%	29.3	1.61	Lognormal	3.72	3.72
Vinyl chloride	176	*6.02	0.28	0.0036	Gamma	0.0065	0.0065
Semi-Volatile Organics							
Benzo(a)pyrene	93	91.4%	0.23	0.04	Gamma	0.054	0.054
Herbicides/Pesticides							
MCPP	67	97.0%	93.5	27.6	Non-parametric	30.1	30.1
Toxaphene	67	98.5%	2.15	NA	NA	NA	2.15
Inorganics							
Arsenic	95	4.2%	176	7.14	Non-parametric	11.0	11.0
Lead ³	95	1.1%	813	46.9	NA	NA	46.9

Notes:

* The dataset for the Central Area consists of data for samples collected from a depth of 15 feet or less.

¹ Details of all statistical calculations are provided in Appendix B-2.

² The Exposure Point Concentration (EPC) is the lower of the maximum detected concentration or the Upper Confidence Limit (UCL).

³ The EPC for lead is based on the arithmetic mean; statistics are not applicable.

NA - Statistics not applicable because only one distinct data value was detected.

TABLE 3-5
EXPOSURE POINT CONCENTRATIONS FOR CONSTITUENTS OF INTEREST IN SURFACE SOIL - EASTERN AREA
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituents of Interest	Number of Samples	Percent Non-detect	Maximum Detection (mg/kg)	Arithmetic Mean ¹ (mg/kg)	Distribution	Upper Confidence Limit ¹ (mg/kg)	Exposure Point Concentration ² (mg/kg)
Volatile Organics							
1,2,4-Trimethylbenzene	61	86.9%	34.4	0.91	Gamma	1.98	1.98
Ethylbenzene	61	83.6%	51.3	2.02	Non-parametric	9.68	9.68
Naphthalene	61	91.8%	2.00	0.075	Normal	0.14	0.14
Tetrachloroethene	61	26.2%	8.62	0.19	Non-parametric	1.08	1.08
Total Xylenes	61	83.6%	229	7.41	Non-parametric	36.8	36.8
Trichloroethene	61	65.6%	1.34	0.03	Non-parametric	0.12	0.12
Vinyl chloride	61	85.3%	0.37	0.0086	Gamma	0.019	0.019
Semi-Volatile Organics							
Benzo(a)pyrene	34	94.1%	0.14	0.0933	Non-parametric	0.17	0.14
Inorganics							
Arsenic	43	60.5%	43.2	3.42	Non-parametric	5.14	5.14
Lead ³	44	47.7%	1710	130	NA	NA	130

Notes:

¹ Details of all statistical calculations are provided in Appendix B-3.

² The Exposure Point Concentration (EPC) is the lower of the maximum detected concentration or the Upper Confidence Limit (UCL).

³ The EPC for lead is based on the arithmetic mean; statistics are not applicable.

NA - Statistics not applicable.

ND - This constituent was not detected in the surface soil data set.

TABLE 3-6
EXPOSURE POINT CONCENTRATIONS FOR CONSTITUENTS OF INTEREST IN SURFACE AND SUBSURFACE SOIL - EASTERN AREA *
 Clean Harbors Kansas, LLC - Wichita, Kansas

Constituents of Interest	Number of Samples	Percent Non-detect	Maximum Detection (mg/kg)	Arithmetic Mean ¹ (mg/kg)	Distribution	Upper Confidence Limit ¹ (mg/kg)	Exposure Point Concentration ² (mg/kg)
Volatile Organics							
1,2,4-Trimethylbenzene	152	83.6%	107	1.73	Lognormal	7.58	7.58
Ethylbenzene	152	83.6%	881	12.9	Non-parametric	63.4	63.4
Naphthalene	152	90.1%	4.96	0.07	Lognormal	0.30	0.30
Tetrachloroethene	152	32.9%	277	2.03	Non-parametric	13.4	13.4
Total Xylenes	152	80.3%	4640	63.8	Non-parametric	319	319
Trichloroethene	152	65.1%	28.2	0.20	Non-parametric	1.02	1.02
Vinyl chloride	152	89.5%	2.16	0.02	Non-parametric	0.11	0.11
Semi-Volatile Organics							
Benzo(a)pyrene	35	94.3%	0.14	0.09	Non-parametric	0.17	0.14
Inorganics							
Arsenic	62	41.9%	43.2	3.78	Lognormal	4.99	4.99
Lead ³	69	30.4%	4970	193	NA	NA	193

Notes:

* The dataset for the Eastern Area consists of data for samples collected from a depth of 15 feet or less.

¹ Details of all statistical calculations are provided in Appendix B-3.

² The Exposure Point Concentration (EPC) is the lower of the maximum detected concentration or the Upper Confidence Limit (UCL).

³ The EPC for lead is based on the arithmetic mean; statistics are not applicable.

NA - Statistics not applicable.

TABLE 3-7
EXPOSURE POINT CONCENTRATIONS FOR CONSTITUENTS OF INTEREST IN ONSITE GROUNDWATER -
VAPOR INTRUSION - WESTERN AREA
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituents of Interest	Number of Samples	Percent Non-detect	Maximum Detection (ug/L)	Arithmetic Mean ¹ (ug/L)	Distribution	Upper Confidence Limit ¹ (ug/L)	Exposure Point Concentration ² (ug/L)
Volatile Organics							
1,1-Dichloroethane	34	76.5%	2.50	0.60	Gamma	0.75	0.75
Ethylbenzene	35	97.1%	1.60	NA	NA	NA	1.60
Tetrachloroethene	35	5.7%	230	49.0	Gamma	94.7	94.7
Trichloroethene	35	11.4%	93.6	12.7	Gamma	26.4	26.4
Vinyl chloride	35	100.0%	ND	NA	NA	NA	ND

Notes:

* The dataset for the Western Area consists of data for samples collected from the shallow aquifer.

¹ Details of all statistical calculations are provided in Appendix B-4.

² The Exposure Point Concentration (EPC) is the lower of the maximum detected concentration or the Upper Confidence Limit (UCL).

NA - Statistics not applicable because too few distinct data values were detected.

ND - This constituent was not detected in this area.

TABLE 3-8
EXPOSURE POINT CONCENTRATIONS FOR CONSTITUENTS OF INTEREST IN ONSITE GROUNDWATER * -
VAPOR INTRUSION - CENTRAL AREA
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituents of Interest	Number of Samples	Percent Non-detect	Maximum Detection (ug/L)	Arithmetic Mean ¹ (ug/L)	Distribution	Upper Confidence Limit ¹ (ug/L)	Exposure Point Concentration ² (ug/L)
Volatile Organics							
1,1-Dichloroethane	47	68.1%	26.2	2.20	Gamma	3.32	3.32
Ethylbenzene	47	95.7%	22.1	1.45	Non-parametric	7.70	7.70
Tetrachloroethene	47	21.3%	725	37.9	Lognormal	150	150
Trichloroethene	47	25.5%	220	15.4	Gamma	39.7	39.7
Vinyl chloride	47	78.7%	102	4.01	Lognormal	14.2	14.2

Notes:

* The dataset for the Central Area consists of data for samples collected from the shallow aquifer.

¹ Details of all statistical calculations are provided in Appendix B-5.

² The Exposure Point Concentration (EPC) is the lower of the maximum detected concentration or the Upper Confidence Limit (UCL).

**TABLE 3-9
 EXPOSURE POINT CONCENTRATIONS FOR CONSTITUENTS OF INTEREST IN ONSITE GROUNDWATER * -
 VAPOR INTRUSION - EASTERN AREA
 Clean Harbors Kansas, LLC - Wichita, Kansas**

Constituents of Interest	Number of Samples	Percent Non-detect	Maximum Detection (ug/L)	Arithmetic Mean ¹ (ug/L)	Distribution	Upper Confidence Limit ¹ (ug/L)	Exposure Point Concentration ² (ug/L)
Volatile Organics							
1,1-Dichloroethane	35	60.0%	108	5.63	Non-parametric	11.7	11.7
Ethylbenzene	35	91.4%	43.1	2.27	Normal	4.72	4.72
Tetrachloroethene	35	34.3%	281	16.9	Non-parametric	117	117
Trichloroethene	35	8.6%	110	17.7	Lognormal	66.5	66.5
Vinyl chloride	35	65.7%	14.2	1.44	Gamma	2.17	2.17

Notes:

* The dataset for the Eastern Area consists of data for samples collected from the shallow aquifer.

¹ Details of all statistical calculations are provided in Appendix B-6.

² The Exposure Point Concentration (EPC) is the lower of the maximum detected concentration or the Upper Confidence Limit (UCL).

TABLE 3-10
EXPOSURE POINT CONCENTRATIONS FOR CONSTITUENTS OF INTEREST IN INDOOR AIR
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituents of Interest	Number of Samples	Percent Non-detect	Maximum Detection (ug/m ³)	Arithmetic Mean (ug/m ³)	Exposure Point Concentration ¹ (ug/m ³)
Volatile Organics					
1,2,4-Trimethylbenzene	2	50.0%	18.0	9.25	18.0

Notes:

¹ Due to the small number of samples, the Exposure Point Concentration (EPC) is the maximum detected concentration.

TABLE 3-11
EXPOSURE POINT CONCENTRATIONS FOR CONSTITUENTS OF INTEREST IN SEDIMENT
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituents of Interest	Number of Samples	Percent Non-detect	Maximum Detection (mg/kg)	Arithmetic Mean ¹ (mg/kg)	Distribution	Upper Confidence Limit ¹ (mg/kg)	Exposure Point Concentration ² (mg/kg)
Semi-Volatile Organics							
Benzo(a)pyrene	11	81.8%	0.061	0.049	Non-parametric	0.071	0.061
Inorganics							
Arsenic	11	0.0%	13.4	6.00	Normal	7.74	7.74
Lead ³	11	0.0%	3320	323	NA	NA	323

Notes:

¹ Details of all statistical calculations are provided in Appendix B-7.

² The Exposure Point Concentration (EPC) is the lower of the maximum detected concentration or the Upper Confidence Limit (UCL).

³ The EPC for lead is based on the arithmetic mean; statistics are not applicable.

TABLE 3-12
FACTORS USED IN CALCULATING A PARTICULATE EMISSION FACTOR FOR WIND EROSION
 Clean Harbors Kansas, LLC - Wichita, Kansas

Equation:

$$PEF = Q / C_{wind} \times \frac{3600s / hr}{0.036 \times (1 - V) \times (U_m / U_t)^3 \times F(x)}$$

Symbol	Factor	Value	Source
PEF	Particulate emission factor (m ³ /kg)	9.38E+08	Calculated
Q/C _{wind}	Inverse of mean concentration at center of a 2-acre-square source (g/m ² -s per kg/m ³)	64.68	Value for Lincoln, NE, for a 2-acre site (Exhibit D-2; USEPA, 2002a)
V	Fraction of vegetative cover (unitless)	0.5	Default value from Equation 4-5 (USEPA, 2002a)
U _m	Mean annual wind speed (m/s)	4.69	Default value from Equation 4-5 (USEPA, 2002a)
U _t	Equivalent threshold value of windspeed at 7 m (m/s)	11.32	Default value from Equation 4-5 (USEPA, 2002a)
F(x)	Function dependant on U _m /U _t derived using Cowherd et al. (1985) (unitless)	0.194	Default value from Equation 4-5 (USEPA, 2002a)

TABLE 3-13
EXPOSURE POINT CONCENTRATIONS FOR PARTICULATE EMISSIONS
IN AMBIENT AIR - OUTDOOR WORKER SCENARIO
 Clean Harbors Kansas, LLC - Wichita, Kansas

Area	Constituent of Interest	Soil Source Concentration (mg/kg)	Particulate Emission Factor PEF¹ (m³/kg)	Concentration in Ambient Air² (mg/m³)
Western	Volatile Organics			
	Tetrachloroethene	41.4	9.38E+08	4.41E-08
	Trichloroethene	11.7	9.38E+08	1.24E-08
	Inorganics			
	Arsenic	121	9.38E+08	1.29E-07
Central	Volatile Organics			
	1,2,4-Trimethylbenzene	0.0064	9.38E+08	6.77E-12
	Ethylbenzene	0.0022	9.38E+08	2.39E-12
	Naphthalene	0.004	9.38E+08	4.23E-12
	Tetrachloroethene	37.2	9.38E+08	3.97E-08
	Total Xylenes	0.12	9.38E+08	1.27E-10
	Trichloroethene	5.76	9.38E+08	6.14E-09
	Vinyl chloride	0.01	9.38E+08	1.14E-11
	Semi-Volatile Organics			
	Benzo(a)pyrene	0.055	9.38E+08	5.82E-11
	Herbicides/Pesticides			
	MCPP	30.1	9.38E+08	3.21E-08
	Toxaphene	2.15	9.38E+08	2.29E-09
	Inorganics			
Arsenic	13.6	9.38E+08	1.45E-08	

TABLE 3-13
EXPOSURE POINT CONCENTRATIONS FOR PARTICULATE EMISSIONS
IN AMBIENT AIR - OUTDOOR WORKER SCENARIO
 Clean Harbors Kansas, LLC - Wichita, Kansas

Area	Constituent of Interest	Soil Source Concentration (mg/kg)	Particulate Emission Factor PEF ¹ (m ³ /kg)	Concentration in Ambient Air ² (mg/m ³)
Eastern Area	Volatile Organics			
	1,2,4-Trimethylbenzene	1.98	9.38E+08	2.11E-09
	Ethylbenzene	9.68	9.38E+08	1.03E-08
	Naphthalene	0.14	9.38E+08	1.03E-08
	Tetrachloroethene	1.08	9.38E+08	1.15E-09
	Total Xylenes	36.8	9.38E+08	3.93E-08
	Trichloroethene	0.12	9.38E+08	1.32E-10
	Vinyl chloride	0.019	9.38E+08	2.06E-11
	Inorganics			
Arsenic	5.14	9.38E+08	5.48E-09	

Notes:

¹ Particulate Emission Factor (PEF) calculated as per USEPA (2002a) guidance. See Table 3-X.

² Ambient air concentration is calculated as the soil source concentration divided by the TF.

TABLE 3-14
FACTORS USED IN CALCULATING A PARTICULATE EMISSION FACTOR FOR CONSTRUCTION ACTIVITIES
Clean Harbors Kansas, LLC - Wichita, Kansas

Equation:

$$PEF_{sc} = Q/C_{sr} \times \frac{1}{F_D} \times \left[\frac{T \times A_R}{556 \times \left(\frac{W}{3}\right)^{0.4} \times \frac{(365d/yr - p)}{365d/yr} \times \sum VKT} \right]$$

Symbol	Factor	Value	Source
PEF _{sc}	Subchronic particulate emission factor (m ³ /kg)	5.87E+06	Calculated
Q/C _{sr}	Inverse of 1-hr average air concentration along a straight road segment bisecting a 2-acre-square site (g/m ² -s per kg/m ³)	18.44	Value for a 2-acre site calculated using Equation 5-6 from USEPA (2002a)
F _D	Dispersion correction factor (unitless)	0.187	Calculated assuming a construction duration of 3024 hours (24 hrs/day for 126 days) using Equation E-16 (USEPA, 2002a)
T	Total time over which construction occurs (s)	1.09E+07	Site-specific: 24 hrs/day for 126 days/yr
A _R	Surface area of contaminated road segment (m ²)	836.1	Assumes a road length of 300 ft and width of 30 ft
W	Mean vehicle weight (tons)	8	Assumes traffic consists of twenty 2-ton cars and ten 20-ton trucks
p	Number of days with at least 0.01 inches of precipitation (days/yr)	90	Estimated from Exhibit 5-2 (USEPA, 2002a)
ΣVKT	Sum of fleet vehicle km traveled during the exposure duration	246.8	Assumes each vehicle travels the length of the road once per day for 90 days/yr

TABLE 3-15
EXPOSURE POINT CONCENTRATIONS FOR PARTICULATE EMISSIONS
IN AMBIENT AIR - CONSTRUCTION SCENARIO
 Clean Harbors Kansas, LLC - Wichita, Kansas

Area	Constituent of Interest	Soil Source Concentration (mg/kg)	Particulate Emission Factor PEF ¹ (m ³ /kg)	Concentration in Ambient Air ² (mg/m ³)
Western Area	Volatile Organics			
	Tetrachloroethene	9.56	5.87E+06	1.63E-06
	Trichloroethene	2.61	5.87E+06	4.45E-07
	Inorganics			
	Arsenic	86.7	5.87E+06	1.48E-05
Central Area	Volatile Organics			
	1,2,4-Trimethylbenzene	53.7	5.87E+06	9.16E-06
	Ethylbenzene	4.23	5.87E+06	7.21E-07
	Naphthalene	7.96	5.87E+06	1.36E-06
	Tetrachloroethene	45.4	5.87E+06	7.73E-06
	Total Xylenes	13.3	5.87E+06	2.27E-06
	Trichloroethene	3.72	5.87E+06	6.34E-07
	Vinyl chloride	0.0065	5.87E+06	1.11E-09
	Semi-Volatile Organics			
	Benzo(a)pyrene	0.054	5.87E+06	9.26E-09
	Herbicides/Pesticides			
	MCPP	30.1	5.87E+06	5.12E-06
	Toxaphene	2.15	5.87E+06	3.66E-07
	Inorganics			
Arsenic	11.0	5.87E+06	1.88E-06	

TABLE 3-15
EXPOSURE POINT CONCENTRATIONS FOR PARTICULATE EMISSIONS
IN AMBIENT AIR - CONSTRUCTION SCENARIO
 Clean Harbors Kansas, LLC - Wichita, Kansas

Area	Constituent of Interest	Soil Source Concentration (mg/kg)	Particulate Emission Factor PEF¹ (m³/kg)	Concentration in Ambient Air² (mg/m³)
Eastern Area	Volatile Organics			
	1,2,4-Trimethylbenzene	7.58	5.87E+06	1.29E-06
	Ethylbenzene	63.4	5.87E+06	1.08E-05
	Naphthalene	0.3	5.87E+06	5.13E-08
	Tetrachloroethene	13.4	5.87E+06	2.29E-06
	Total Xylenes	319	5.87E+06	5.44E-05
	Trichloroethene	1.02	5.87E+06	1.73E-07
	Vinyl chloride	0.11	5.87E+06	1.94E-08
	Inorganics			
Arsenic	4.99	5.87E+06	8.51E-07	

Notes:

¹ Particulate Emission Factor (PEF) calculated as per USEPA (2002a) guidance. See Table 3-X.

² Ambient air concentration is calculated as the soil source concentration divided by the TF.

TABLE 3-16
CALCULATION OF SOIL VOLATILIZATION FACTORS FOR AMBIENT (OUTDOOR) AIR
OUTDOOR WORKER SCENARIO
Clean Harbors Kansas, LLC - Wichita, Kansas

Equation:

$$VF \text{ (m}^3\text{/kg)} = Q/C_{vol} \times \frac{(3.14 \times Da \times T)^{1/2}}{(2 \times Pb \times Da)} \times 10^{-4} \text{ (m}^2\text{/cm}^2\text{)}$$

where: $Da \text{ (cm}^2\text{/s)} = \frac{(Ea^{10/3} \times DiH'_{TS} + Ew^{10/3} Dw) / n^2}{Pb Kd + Ew + Ea H'_{TS}}$

Parameter	Value	Variable	Units	Source
inverse of the mean concentration at the center of a 2-acre-square site	64.68	Q/C _{vol}	$\frac{\text{(g/m}^2\text{-s)}}{\text{(kg/m}^3\text{)}}$	Value for Lincoln, NE, for a 2-acre site (Exhibit D-3; USEPA, 2002a)
air-filled soil porosity	0.274	Ea	L _{air} /L _{soil}	(USEPA, 2004a) default for clay loam
total soil porosity	0.442	n	L _{pore} /L _{soil}	(USEPA, 2004a) default for clay loam
water-filled soil porosity	0.168	Ew	L _{water} /L _{soil}	(USEPA, 2004a) default for clay loam
dry soil bulk density	1.48	Pb	g/cm ³	(USEPA, 2004a) default for clay loam
diffusivity in air	--	Di	cm ² /sec	constituent-specific
Henry's Law Constant at system temperature	--	H' _{TS}	unitless	constituent-specific
diffusivity in water	--	Dw	cm ² /sec	constituent-specific
soil-water partition coefficient	--	Kd	cm ³ /g	Koc x foc
soil-organic carbon partition coefficient	--	Koc	cm ³ /g	constituent-specific
exposure interval	7.88E+08	T	sec	based on an exposure duration of 25 yrs
fraction organic carbon	0.01	foc	g/g	KDHE (2003) default

Constituent-Specific Factors

Constituent	H' _{TS} (unitless)	Di (cm ² /sec)	Dw (cm ² /sec)	Koc (cm ³ /g)	Da (cm ² /s)	VF (m ³ /kg)
Volatile Organics						
1,2,4-Trimethylbenzene	1.22E-01	6.06E-02	7.92E-06	1.35E+03	2.50E-05	21735
Ethylbenzene	1.72E-01	7.50E-02	7.80E-06	3.63E+02	1.58E-04	8639
Naphthalene	8.83E-03	5.90E-02	7.50E-06	2.00E+03	1.20E-06	99247
Tetrachloroethene	4.19E-01	7.20E-02	8.20E-06	1.55E+02	8.00E-04	3843
Total xylenes	1.67E-01	7.69E-02	8.44E-06	3.89E+02	1.47E-04	8972
Trichloroethene	2.50E-01	7.90E-02	9.10E-06	1.66E+02	5.02E-04	4852
Vinyl chloride	8.27E-01	1.06E-01	1.23E-05	1.86E+01	8.95E-03	1149

H'_{TS} is calculated assuming the default soil temperature of 13.9°C and using the equations provided in the vapor intrusion User's Guide (USEPA, 2004a). Other constituent-specific factors are also based on USEPA (2004a).

TABLE 3-17
EXPOSURE POINT CONCENTRATIONS FOR VOLATILE EMISSIONS
IN AMBIENT AIR - OUTDOOR WORKER SCENARIO
 Clean Harbors Kansas, LLC - Wichita, Kansas

Area	Constituent of Interest	Soil Source Concentration (mg/kg)	Volatilization Factor VF ¹ (m ³ /kg)	Concentration in Ambient Air ² (mg/m ³)
Western Area	Volatile Organics			
	Tetrachloroethene	41.38	3843	1.08E-02
	Trichloroethene	11.67	4852	2.41E-03
Central Area	Volatile Organics			
	1,2,4-Trimethylbenzene	0.0064	21735	2.92E-07
	Ethylbenzene	0.0022	8639	2.59E-07
	Naphthalene	0.004	99247	4.00E-08
	Tetrachloroethene	37.2	3843	9.68E-03
	Total Xylenes	0.12	8972	1.33E-05
	Trichloroethene	5.76	4852	1.19E-03
	Vinyl chloride	0.011	1149	9.31E-06
Eastern Area	Volatile Organics			
	1,2,4-Trimethylbenzene	1.98	21735	9.10E-05
	Ethylbenzene	9.7	8639	1.12E-03
	Naphthalene	0.1	99247	1.43E-06
	Tetrachloroethene	1.1	3843	2.80E-04
	Total Xylenes	37	8972	4.10E-03
	Trichloroethene	0.12	4852	2.56E-05
	Vinyl chloride	0.02	1149	1.68E-05

Notes:

¹ Volatilization Factor (PEF) calculated as per USEPA (2002a) guidance. See Table 3-16.

² Ambient air concentration is calculated as the soil source concentration divided by the TF.

TABLE 3-18
CALCULATION OF SUBCHRONIC SOIL VOLATILIZATION FACTORS FOR AMBIENT (OUTDOOR) AIR
CONSTRUCTION SCENARIO
Clean Harbors Kansas, LLC - Wichita, Kansas

Equation:

$$VF_{sc} (m^3/kg) = Q/C_{sa} \times \frac{(3.14 \times Da \times T)^{1/2}}{(2 \times Pb \times Da)} \times 10^{-4} (m^2/cm^2) \times (1/F_D)$$

where:

$$Da (cm^2/s) = \frac{(Ea^{10/3} \times DiH'_{TS} + Ew^{10/3} Dw) / n^2}{Pb Kd + Ew + Ea H'_{TS}}$$

Parameter	Value	Variable	Units	Source
inverse of 1-hr average air concentration at the center of a 2-acre-square site	11.06	Q/C _{sa}	(g/m ² -s) (kg/m ³)	Value for a 2-acre site calculated using Equation 5-15 from USEPA (2002a)
air-filled soil porosity	0.274	Ea	L _{air} /L _{soil}	(USEPA, 2004a) default for clay loam
total soil porosity	0.442	n	L _{pore} /L _{soil}	(USEPA, 2004a) default for clay loam
water-filled soil porosity	0.168	Ew	L _{water} /L _{soil}	(USEPA, 2004a) default for clay loam
dry soil bulk density	1.48	Pb	g/cm ³	(USEPA, 2004a) default for clay loam
diffusivity in air	--	Di	cm ² /sec	constituent-specific
Henry's Law Constant at system temperature	--	H' _{TS}	unitless	constituent-specific
diffusivity in water	--	Dw	cm ² /sec	constituent-specific
soil-water partition coefficient	--	Kd	cm ³ /g	Koc x foc
soil-organic carbon partition coefficient	--	Koc	cm ³ /g	constituent-specific
exposure interval	1.09E+07	T	sec	Site-specific: 24 hrs/day for 126 days/yr
fraction organic carbon	0.01	foc	g/g	KDHE (2003) default
dispersion correction factor	0.187	F _D	unitless	calculated assuming a construction duration of 3024 hours (24 hrs/day for 126 days) using Equation E-16 (USEPA, 2002a)

Constituent-Specific Factors

Constituent	H' _{TS} (unitless)	Di (cm ² /sec)	Dw (cm ² /sec)	Koc (cm ³ /g)	Da (cm ² /s)	VF (m ³ /kg)
Volatile Organics						
1,2,4-Trimethylbenzene	1.22E-01	6.06E-02	0.00000792	1.35E+03	2.50E-05	2337
Ethylbenzene	1.72E-01	7.50E-02	7.80E-06	3.63E+02	1.58E-04	929
Naphthalene	8.83E-03	5.90E-02	7.50E-06	2.00E+03	1.20E-06	10669
Tetrachloroethene	4.19E-01	7.20E-02	8.20E-06	1.55E+02	8.00E-04	413
Total Xylenes	1.67E-01	7.69E-02	8.44E-06	3.89E+02	1.47E-04	965
Trichloroethene	2.50E-01	7.90E-02	9.10E-06	1.66E+02	5.02E-04	522
Vinyl Chloride	8.27E-01	1.06E-01	1.23E-05	1.86E+01	8.95E-03	124

H'_{TS} is calculated assuming the default soil temperature of 13.9°C and using the equations provided in the vapor intrusion User's Guide (USEPA, 2004a). Other constituent-specific factors are also based on USEPA (2004a).

TABLE 3-19
EXPOSURE POINT CONCENTRATIONS FOR VOLATILE EMISSIONS
IN AMBIENT AIR - CONSTRUCTION SCENARIO
 Clean Harbors Kansas, LLC - Wichita, Kansas

Area	Constituent of Interest	Soil Source Concentration (mg/kg)	Volatilization Factor VF ¹ (m ³ /kg)	Concentration in Ambient Air ² (mg/m ³)
Western Area	Volatile Organics			
	Tetrachloroethene	9.56	413	2.31E-02
	Trichloroethene	2.61	522	5.01E-03
Central Area	Volatile Organics			
	1,2,4-Trimethylbenzene	53.7	2337	2.30E-02
	Ethylbenzene	4.23	929	4.55E-03
	Naphthalene	7.96	10669	7.46E-04
	Tetrachloroethene	45.4	413	1.10E-01
	Total Xylenes	13.3	965	1.38E-02
	Trichloroethene	3.72	522	7.13E-03
	Vinyl chloride	0.01	124	5.29E-05
Eastern Area	Volatile Organics			
	1,2,4-Trimethylbenzene	7.58	2337	3.25E-03
	Ethylbenzene	63.4	929	6.83E-02
	Naphthalene	0.3	10669	2.82E-05
	Tetrachloroethene	13.4	413	3.25E-02
	Total Xylenes	319	965	3.31E-01
	Trichloroethene	1.02	522	1.95E-03
	Vinyl chloride	0.11	124	9.23E-04

Notes:

¹ Volatilization Factor (PEF) calculated as per USEPA (2002a) guidance. See Table 3-18.

² Ambient air concentration is calculated as the soil source concentration divided by the TF.

TABLE 3-20
CALCULATION OF SOIL GAS CONCENTRATIONS (GROUNDWATER SOURCE)
AND INDOOR AIR CONCENTRATIONS - WESTERN AREA
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituent of Interest	Groundwater EPC (mg/L)	H _{TS} ¹ (unitless)	Soil Gas Concentration ² (mg/m ³)	TF for Soil Gas to Indoor Air ³ (cm ³ /cm ³)	Volatile EPC Indoor Air ⁴ (mg/m ³)
Volatile Organics					
1,1-Dichloroethane	0.00075	1.47E-01	1.10E-01	1.05E-05	1.15E-06
Ethylbenzene	0.0016	1.72E-01	2.76E-01	1.01E-05	2.79E-06
Tetrachloroethene	0.095	4.19E-01	3.97E+01	9.50E-06	3.77E-04
Trichloroethene	0.026	2.50E-01	6.61E+00	1.02E-05	6.75E-05

Notes:

¹ H_{TS} is calculated assuming a system temperature of 13.9°C and using the equations provided in the vapor intrusion User's Guide (USEPA, 2004a).

² Soil gas concentration is calculated as EPC GW x 1000 L/m³ x H_{TS}, as per the vapor intrusion User's Guide (USEPA, 2004a).

³ Details of Transport Factor (TF) calculations are provided in Appendix C.

⁴ Indoor air concentration is calculated as the soil gas concentration multiplied by the TF.

TABLE 3-21
CALCULATION OF SOIL GAS CONCENTRATIONS (GROUNDWATER SOURCE)
AND INDOOR AIR CONCENTRATIONS - CENTRAL AREA
 Clean Harbors Kansas, LLC - Wichita, Kansas

Constituent of Interest	Groundwater EPC (mg/L)	H _{TS} ¹ (unitless)	Soil Gas Concentration ² (mg/m ³)	TF for Soil Gas to Indoor Air ³ (cm ³ /cm ³)	Volatile EPC Indoor Air ⁴ (mg/m ³)
Volatile Organics					
1,1-Dichloroethane	0.0033	1.47E-01	4.88E-01	1.05E-05	5.11E-06
Ethylbenzene	0.0077	1.72E-01	1.33E+00	1.01E-05	1.34E-05
Tetrachloroethene	0.15	4.19E-01	6.28E+01	9.50E-06	5.96E-04
Trichloroethene	0.04	2.50E-01	9.93E+00	1.02E-05	1.01E-04
Vinyl chloride	0.014	8.27E-01	1.17E+01	1.13E-05	1.33E-04

Notes:

- ¹ H_{TS} is calculated assuming a system temperature of 13.9°C and using the equations provided in the vapor intrusion User's Guide (USEPA, 2004a).
- ² Soil gas concentration is calculated as EPC GW x 1000 L/m³ x H_{TS}, as per the vapor intrusion User's Guide (USEPA, 2004a).
- ³ Details of Transport Factor (TF) calculations are provided in Appendix C.
- ⁴ Indoor air concentration is calculated as the soil gas concentration multiplied by the TF.

TABLE 3-22
CALCULATION OF SOIL GAS CONCENTRATIONS (GROUNDWATER SOURCE)
AND INDOOR AIR CONCENTRATIONS - EASTERN AREA
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituent of Interest	Groundwater EPC (mg/L)	H _{TS} ¹ (unitless)	Soil Gas Concentration ² (mg/m ³)	TF for Soil Gas to Indoor Air ³ (cm ³ /cm ³)	Volatile EPC Indoor Air ⁴ (mg/m ³)
Volatile Organics					
1,1-Dichloroethane	0.012	1.47E-01	1.72E+00	1.05E-05	1.80E-05
Ethylbenzene	0.0047	1.72E-01	8.15E-01	1.01E-05	8.25E-06
Tetrachloroethene	0.12	4.19E-01	4.88E+01	9.50E-06	4.64E-04
Trichloroethene	0.066	2.50E-01	1.66E+01	1.02E-05	1.70E-04
Vinyl chloride	0.0022	8.27E-01	1.79E+00	1.13E-05	2.03E-05

Notes:

¹ H_{TS} is calculated assuming a system temperature of 13.9°C and using the equations provided in the vapor intrusion User's Guide (USEPA, 2004a).

² Soil gas concentration is calculated as EPC GW x 1000 L/m³ x H_{TS}, as per the vapor intrusion User's Guide (USEPA, 2004a).

³ Details of Transport Factor (TF) calculations are provided in Appendix C.

⁴ Indoor air concentration is calculated as the soil gas concentration multiplied by the TF.

TABLE 3-23
GENERAL FORMULA FOR CALCULATION OF CONSTITUENT INTAKES
Clean Harbors Kansas, LLC - Wichita, Kansas

Symbol	Factor	Units	Comments
C	Chemical Concentration	mg/kg, mg/L, mg/m ³	Concentration of chemical in environmental medium
CR	Contact Rate	mg/day, L/day, m ³ /day	Receptor's rate of contact with environmental medium
EF	Exposure Frequency	days/year	Days per year that the receptor may be exposed
ED	Exposure Duration	years	Number of years during which receptor may be exposed
BW	Body Weight	kilograms	Intake is normalized for receptor's body weight
AT	Averaging Time	days	Period over which exposure is averaged

$$\text{Intake (mg/kg-day)} = \frac{C \times CR \times EF \times ED}{BW \times AT}$$

TABLE 3-24
DERMAL ABSORPTION FRACTIONS FOR CONSTITUENTS OF INTEREST
IN SOIL AND SEDIMENT
 Clean Harbors Kansas, LLC - Wichita, Kansas

Constituent of Interest	Dermal Absorption Fraction (unitless)	Source / Comment
Volatile Organics		
1,2,4-Trimethylbenzene	NA	USEPA (2004b) Section 3.2.2.4
Ethylbenzene	NA	USEPA (2004b) Section 3.2.2.4
Tetrachloroethene	NA	USEPA (2004b) Section 3.2.2.4
Ttotal Xylenes	NA	USEPA (2004b) Section 3.2.2.4
Trichloroethene	NA	USEPA (2004b) Section 3.2.2.4
Vinyl chloride	NA	USEPA (2004b) Section 3.2.2.4
Semi-Volatile Organics		
Naphthalene	0.13	USEPA (2013a)
Benzo(a)pyrene	0.13	USEPA (2013a)
Herbicides/Pesticides		
MCPP	0.1	USEPA (2013a)
Toxaphene	0.1	USEPA (2013a)
Inorganics		
Arsenic	0.03	USEPA (2013a)

TABLE 3-25
FACTORS USED IN DOSE CALCULATIONS: INCIDENTAL INGESTION OF SOIL OR SEDIMENT
Clean Harbors Kansas, LLC - Wichita, Kansas

Symbol	Exposure Factor	Outdoor Site Worker	Construction Worker	Recreational Adult	Recreational Youth
CS	Constituent Concentration in Soil/Sediment (mg/kg)	Constituent- and Area-Specific; see Tables 3-1 to 3-6; and Table 3-11.			
IR	Soil/Sediment Ingestion Rate	100 mg/day	330 mg/day	100 mg/day	100 mg/day
ABS	Gastrointestinal Absorption Factor	100% for all constituents except arsenic; 60% bioavailability for arsenic			
CF	Conversion Factor	1 x 10 ⁻⁶ kg/mg	1 x 10 ⁻⁶ kg/mg	1 x 10 ⁻⁶ kg/mg	1 x 10 ⁻⁶ kg/mg
EF	Exposure Frequency	225 days/year	90 days/year	39 days/year	39 days/year
ED	Exposure Duration	25 years	1 year	30 years	10 years
BW	Body Weight	70 kg	70 kg	70 kg	44.3 kg
AT	Averaging Time	9,125 days (NC) 25,550 days (C)	365 days (NC) 25,550 days (C)	10,950 days (NC) 25,550 days (C)	3,650 days (NC) 25,550 days (C)

$$\text{Average Daily Dose (ADD)} = \text{CS} \times \text{IR} \times \text{ABS} \times \text{CF} \times \text{EF} \times \text{ED} \times 1/\text{BW} \times 1/\text{AT}(\text{NC})$$

$$\text{Lifetime Average Daily Dose (LADD)} = \text{CS} \times \text{IR} \times \text{ABS} \times \text{CF} \times \text{EF} \times \text{ED} \times 1/\text{BW} \times 1/\text{AT}(\text{C})$$

- (NC) - Non-carcinogenic Averaging Time
- (C) - Carcinogenic Averaging Time

TABLE 3-26
FACTORS USED IN DOSE CALCULATIONS: DERMAL CONTACT WITH SOIL OR SEDIMENT
 Clean Harbors Kansas, LLC - Wichita, Kansas

Symbol	Exposure Factor	Outdoor Site Worker	Construction Worker	Recreational Adult	Recreational Youth
CS	Constituent Concentration in Soil or Sediment (mg/kg)	Constituent- and Area-Specific; see Tables 3-1 to 3-6; and Table 3-11.			
CF	Conversion Factor	1 x 10 ⁻⁶ kg/mg	1 x 10 ⁻⁶ kg/mg	1 x 10 ⁻⁶ kg/mg	1 x 10 ⁻⁶ kg/mg
SA	Skin Surface Area	3,300 cm ²	3,300 cm ²	5,700 cm ²	3,780 cm ²
AF	Soil/Sediment Adherence Factor	0.2 mg/cm ²	0.3 mg/cm ²	0.07 mg/cm ²	0.2 mg/cm ²
DAF	Dermal Absorption Fraction (unitless)	Constituent-Specific; see Table 3-24.			
EF	Exposure Frequency	225 days/year	90 days/year	39 days/year	39 days/year
ED	Exposure Duration	25 years	1 year	30 years	10 years
BW	Body Weight	70 kg	70 kg	70 kg	44.3 kg
AT	Averaging Time	9,125 days (NC)	365 days (NC)	10,950 days (NC)	3,650 days (NC)
		25,550 days (C)	25,550 days (C)	25,550 days (C)	25,550 days (C)

$$\text{Average Daily Dose (ADD)} = \text{CS} \times \text{CF} \times \text{SA} \times \text{AF} \times \text{DAF} \times \text{EF} \times \text{ED} \times 1/\text{BW} \times 1/\text{AT}(\text{NC})$$

$$\text{Lifetime Average Daily Dose (LADD)} = \text{CS} \times \text{CF} \times \text{SA} \times \text{AF} \times \text{DAF} \times \text{EF} \times \text{ED} \times 1/\text{BW} \times 1/\text{AT}(\text{C})$$

(NC) - Non-carcinogenic Averaging Time

(C) - Carcinogenic Averaging Time

TABLE 3-27
FACTORS USED TO CALCULATE THE EXPOSURE CONCENTRATION: INHALATION OF VOLATILE OR PARTICULATE EMISSIONS
Clean Harbors Kansas, LLC - Wichita, Kansas

Symbol	Exposure Factor	Outdoor Worker	Construction Worker	Indoor Worker
CA	Constituent Concentration in Air (mg/m ³)	Area, Constituent and Source-Specific		
ET	Exposure Time	8 hr/day	8 hr/day	8 hr/day
EF	Exposure Frequency	225 days/year	90 days/year	250 days/year
ED	Exposure Duration	25 years	1 year	25 years
AT	Averaging Time	219,000 hours (NC)	8,760 hours (NC)	219,000 hours (NC)
		613,200 hours (C)	613,200 hours (C)	613,200 hours (C)

$$\text{Exposure Concentration (for Noncarcinogens)} = CA \times ET \times EF \times ED \times 1/AT(\text{NC})$$

$$\text{Exposure Concentration (for Carcinogens)} = CA \times ET \times EF \times ED \times 1/AT(\text{C})$$

(NC) - Non-carcinogenic Averaging Time

(C) - Carcinogenic Averaging Time

TABLE 4-1
TOXICITY VALUES FOR NONCARCINOGENIC EFFECTS
 Clean Harbors Kansas, LLC - Wichita, Kansas

Constituent of Interest	Target Organ or Critical Effect	Chronic Oral Reference Dose (mg/kg-day)	Subchronic Oral Reference Dose (mg/kg-day)	Absorption Efficiency Factor	Chronic Dermal Reference Dose* (mg/kg-day)	Subchronic Dermal Reference Dose* (mg/kg-day)	Inhalation Reference Conc. (mg/m ³)	Subchronic Inhalation Reference Conc. (mg/m ³)
Volatile Organics								
1,1-Dichloroethane	kidney, CNS	2.00E-01 P	2.00E+00 P	1	2.00E-01	2.00E+00	NA	NA
1,2,4-Trimethylbenzene	blood, respiratory	NA	NA	1	NA	NA	7.00E-03 P	1.00E-01 P
Ethyl acetate	whole body	9.00E-01 I	7.00E-01 P	1	9.00E-01	7.00E-01	7.00E-02 P	7.00E-01 P
Ethylbenzene	liver, kidney, fetus	1.00E-01 I	5.00E-02 P	1	1.00E-01	5.00E-02	1.00E+00 I	9.00E+00 P
Naphthalene	whole body, kidney, thymus, respiratory	2.00E-02 I	6.00E-01 M	1	2.00E-02	6.00E-01	3.00E-03 I	3.00E-03 ch
Tetrachloroethene	CNS	6.00E-03 I	6.00E-03 ch	1	6.00E-03	6.00E-03	4.00E-02 I	4.00E-02 ch
Total Xylenes	whole body, CNS	2.00E-01 I	4.00E-01 P	1	2.00E-01	4.00E-01	1.00E-01 I	4.00E-01 P
Trichloroethene	thymus (immune), heart	5.00E-04 I	5.00E-04 ch	1	5.00E-04	5.00E-04	2.00E-03 I	2.00E-03 ch
Vinyl chloride	liver	3.00E-03 I	3.00E-03 ch	1	3.00E-03	3.00E-03	1.00E-01 I	1.00E-01 ch
Semi-Volatile Organics								
Benzo(a)pyrene	--	NA	NA	1	NA	NA	NA	NA
Herbicides/Pesticides								
MCPP	kidney	1.00E-03 I	1.00E-03 ch	1	1.00E-03	1.00E-03	NA	NA
Toxaphene	--	NA	NA	1	NA	NA	NA	NA
Inorganics								
Arsenic	skin, developmental, cardiovascular, CNS	3.00E-04 I	3.00E-04 ch	1	3.00E-04	3.00E-04	1.50E-05 C	1.50E-05 ch

Notes:

* Dermal RfDs are calculated by multiplying the oral RfDs by the absorption efficiency factor, in accordance with USEPA (2004b).

(I) - Integrated Risk Information System (IRIS; USEPA, 2014a)

(P) - Provisional Peer-Reviewed Toxicity Value (PPRTV; USEPA, 2014b)

(C) - California EPA Toxicity Value as presented in USEPA (2013a)

(M) - Minimal Risk Level (MRL; ATSDR, 2014); chronic or intermediate (i.e., subchronic).

(ch) - Subchronic value is based on the chronic value.

NA - USEPA-derived criteria are not available for this particular exposure route or endpoint.

TABLE 4-2
TOXICITY VALUES FOR POTENTIALLY CARCINOGENIC EFFECTS
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituent of Interest	Weight of Evidence Classification	Oral Cancer Slope Factor (mg/kg-day) ⁻¹	Absorption Efficiency Factor	Dermal Cancer Slope Factor* (mg/kg-day) ⁻¹	Inhalation Unit Risk Factor (ug/m ³) ⁻¹
Volatiles					
1,1-Dichloroethane	C	5.70E-03 C	1	5.70E-03	1.60E-06 C
1,2,4-Trimethylbenzene	Not Assessed	NA	1	NA	NA
Ethyl acetate	Inadequate Data	NA	1	NA	NA
Ethylbenzene	D	1.10E-02 C	1	1.10E-02	2.50E-06 C
Naphthalene	C	NA	1	NA	3.40E-05 C
Tetrachloroethene	Likely to be Carcinogenic to Humans	2.10E-03 I	1	2.10E-03	2.60E-07 I
Total Xylenes	Inadequate Data	NA	1	NA	NA
Trichloroethene	Carcinogenic to Humans	4.60E-02 I	1	4.60E-02	4.10E-06 I
Vinyl chloride	A	7.20E-01 I	1	7.20E-01	4.40E-06 I
Semi-Volatile Organics					
Benzo(a)pyrene *	B2	7.30E+00 I	1	7.30E+00	1.10E-03 C
Herbicides/Pesticides					
MCPP	Not Assessed	NA	1	NA	NA
Toxaphene	B2	1.10E+00 I	1	1.10E+00	3.20E-04 I
Inorganics					
Arsenic	A	1.50E+00 I	1	1.50E+00	4.30E-03 I

Notes:

* Constituent is considered to have a mutagenic mode of action. Age-dependant adjustment factors (ADAFs) are applied to early-life age groups : (i.e., recreational youth) as follows:

- A factor of 3 is applied to the CSF to evaluate exposures from age 7 up to age 16.

* The dermal CSF is calculated by dividing the oral CSF by the absorption efficiency factor, in accordance with USEPA (2004b).

(I) - Integrated Risk Information System (IRIS; USEPA, 2014a)

(C) - California EPA Toxicity Value; as presented in USEPA (2013a)

NA - USEPA-derived criteria are not available for this particular exposure route or endpoint.

TABLE 5-1
SUMMARY OF NONCANCER HAZARD INDICES, POTENTIAL CANCER RISKS AND FETAL BLOOD LEAD LEVELS FOR ALL RECEPTORS
Clean Harbors Kansas, LLC - Wichita, Kansas

Area	Receptor	Exposure Pathways	Total Hazard Index	Potential Cancer Risk	Fetal Blood Lead Level (95th Percentile)
Western Area	Outdoor Worker	Incidental Ingestion & Dermal Contact with Surface Soil Inhalation of Particulates & Volatiles in Ambient Air	0.61	4.66E-05	--
	Construction Worker	Incidental Ingestion & Dermal Contact with Soil Inhalation of Particulates & Volatiles in Ambient Air	0.57	1.60E-06	--
	Indoor Worker	Inhalation of Volatiles in Indoor Air	0.01	3.13E-08	--
Central Area	Outdoor Worker	Incidental Ingestion & Dermal Contact with Surface Soil Inhalation of Particulates & Volatiles in Ambient Air	0.26	7.24E-06	2.73
	Construction Worker	Incidental Ingestion & Dermal Contact with Soil Inhalation of Particulates & Volatiles in Ambient Air	0.66	3.75E-07	2.50
	Indoor Worker (Modeled Concentrations)	Inhalation of Volatiles in Indoor Air	0.015	9.76E-08	--
	Indoor Worker (Measured Concentrations)	Inhalation of Volatiles in Indoor Air	0.59	NA	--
Eastern Area	Outdoor Worker	Incidental Ingestion & Dermal Contact with Surface Soil Inhalation of Particulates & Volatiles in Ambient Air	0.028	2.80E-06	3.27
	Construction Worker	Incidental Ingestion & Dermal Contact with Soil Inhalation of Particulates & Volatiles in Ambient Air	0.25	3.54E-07	2.91
	Indoor Worker	Inhalation of Volatiles in Indoor Air	0.022	7.79E-08	--
East Fork of Chisholm Creek	Recreational Adult	Incidental Ingestion & Dermal Contact with Sediment	0.0028	5.91E-07	2.76
	Recreational Youth	Incidental Ingestion & Dermal Contact with Sediment	0.0051	4.22E-07	2.76

Notes:

Appendix D presents a detailed breakdown of the risk calculations by pathway and constituent.

-- = Lead is not a COI for this area or exposure medium.

NA = Toxicity values are not available for this endpoint or exposure pathway.

TABLE 5-2
NONCANCER HAZARD INDEX AND THEORETICAL EXCESS
LIFETIME CANCER RISK FOR THE OUTDOOR WORKER -
WESTERN AREA
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituent	Noncancer Hazard Index	Potential Cancer Risk
Volatile Organics		
Tetrachloroethene	0.061	2.33E-07
Trichloroethene	0.27	8.93E-07
Inorganics		
Arsenic	0.28	4.55E-05
Pathway Summary	0.61	4.66E-05

TABLE 5-3
NONCANCER HAZARD INDEX AND THEORETICAL EXCESS
LIFETIME CANCER RISK FOR THE CONSTRUCTION WORKER -
WESTERN AREA
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituent	Noncancer Hazard Index	Potential Cancer Risk
Volatile Organics		
Tetrachloroethene	0.049	7.40E-09
Trichloroethene	0.21	2.61E-08
Inorganics		
Arsenic	0.31	1.56E-06
Pathway Summary	0.57	1.60E-06

TABLE 5-4
NONCANCER HAZARD INDEX AND THEORETICAL EXCESS
LIFETIME CANCER RISK FOR THE INDOOR WORKER -
WESTERN AREA
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituent	Noncancer Hazard Index	Potential Cancer Risk
Volatile Organics		
1,1-Dichloroethane	NA	1.50E-10
Ethylbenzene	0.00000064	5.69E-10
Tetrachloroethene	0.0022	7.99E-09
Trichloroethene	0.0077	2.26E-08
Pathway Summary	0.01	3.13E-08

Notes:

NA = Toxicity values are not available for this endpoint

TABLE 5-5
NONCANCER HAZARD INDEX AND THEORETICAL EXCESS
LIFETIME CANCER RISK FOR THE OUTDOOR WORKER -
CENTRAL AREA
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituent	Noncancer Hazard Index	Potential Cancer Risk
Volatile Organics		
1,2,4-Trimethylbenzene	0.0000086	NA
Ethylbenzene	0.00000073	5.53E-11
Naphthalene	0.0000031	9.98E-11
Tetrachloroethene	0.055	2.09E-07
Total xylenes	0.000028	NA
Trichloroethene	0.13	4.40E-07
Vinyl Chloride	0.000022	5.43E-09
Semi-Volatile Organics		
Benzo(a)pyrene	NA	2.33E-07
Herbicides/Pesticides		
MCPP	0.044	NA
Toxaphene	NA	1.23E-06
Inorganics		
Arsenic	0.032	5.11E-06
Pathway Summary	0.26	7.24E-06

Notes:
 NA = Toxicity values are not available for this endpoint

TABLE 5-6
NONCANCER HAZARD INDEX AND THEORETICAL EXCESS
LIFETIME CANCER RISK FOR THE CONSTRUCTION WORKER -
CENTRAL AREA
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituent	Noncancer Hazard Index	Potential Cancer Risk
Volatile Organics		
1,2,4-Trimethylbenzene	0.019	NA
Ethylbenzene	0.00014	1.41E-08
Naphthalene	0.02	2.98E-08
Tetrachloroethene	0.23	3.51E-08
Total xylenes	0.0029	NA
Trichloroethene	0.30	3.72E-08
Vinyl Chloride	0.000046	3.51E-10
Semi-Volatile Organics		
Benzo(a)pyrene	NA	9.16E-09
Herbicides/Pesticides		
MCPP	0.045	NA
Toxaphene	NA	5.12E-08
Inorganics		
Arsenic	0.04	1.99E-07
Pathway Summary	0.66	3.75E-07

Notes:
 NA = Toxicity values are not available for this endpoint

TABLE 5-7
NONCANCER HAZARD INDEX AND THEORETICAL EXCESS
LIFETIME CANCER RISK FOR THE INDOOR WORKER -
CENTRAL AREA - MODELED CONCENTRATIONS
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituent	Noncancer Hazard Index	Potential Cancer Risk
Volatile Organics		
1,1-Dichloroethane	NA	6.67E-10
Ethylbenzene	0.0000031	2.74E-09
Tetrachloroethene	0.0034	1.26E-08
Trichloroethene	0.012	3.39E-08
Vinyl chloride	0.0003	4.77E-08
Pathway Summary	0.015	9.76E-08

Notes:

NA = Toxicity values are not available for this endpoint

TABLE 5-8
NONCANCER HAZARD INDEX AND THEORETICAL EXCESS
LIFETIME CANCER RISK FOR THE INDOOR WORKER -
CENTRAL AREA - MEASURED CONCENTRATIONS
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituent	Noncancer Hazard Index	Potential Cancer Risk
Volatile Organics		
1,2,4-Trimethylbenzene	0.59	NA
Pathway Summary	0.59	NA

Notes:

NA = Toxicity values are not available for this endpoint

TABLE 5-9
CALCULATED BLOOD LEAD CONCENTRATIONS FOR THE OUTDOOR
WORKER EXPOSED TO SURFACE SOIL IN THE CENTRAL AREA
 Clean Harbors Kansas, LLC - Wichita, Kansas

Equations:

$$PbB_{adult,central} = PbB_{adult,0} + (PbS \times BKSF \times IR_S \times AF_S \times EF_S) / AT$$

$$PbB_{adult,0.95} = PbB_{adult,central} \times GSDi^{1.645}$$

$$PbB_{fetal,0.95} = PbB_{adult,0.95} \times R_{fetal/maternal}$$

Symbol	Input Parameter	Value
$PbB_{adult,0}$	Typical blood lead concentration	1.0 $\mu\text{g/dL}$
PbS	Average soil lead concentration	52 $\mu\text{g/g}$
BKSF	Biokinetic slope factor	0.4 $[\mu\text{g/dL}] / [\mu\text{g/day}]$
IR_S	Intake rate of soil	0.10 g/day
AF_S	Absolute absorption fraction	0.12 unitless
EF_S	Exposure frequency	225 days/year
AT	Averaging time	365 days/year
GSDi	Geometric standard deviation	1.8 unitless
$R_{fetal/maternal}$	Transfer factor	0.9 unitless

	Calculated Results	Value
$PbB_{adult,central}$	Blood lead level: Adult, central tendency	1.15 $\mu\text{g/dL}$
$PbB_{adult,0.95}$	Blood lead level: Adult, 95th Percentile	3.03 $\mu\text{g/dL}$
$PbB_{fetal,0.95}$	Blood lead level: Fetus, 95th Percentile	2.73 $\mu\text{g/dL}$

TABLE 5-10
CALCULATED BLOOD LEAD CONCENTRATIONS FOR THE CONSTRUCTION
WORKER EXPOSED TO SURFACE AND SUBSURFACE SOIL IN THE CENTRAL AREA
Clean Harbors Kansas, LLC - Wichita, Kansas

Equations:

$$PbB_{adult,central} = PbB_{adult,0} + (PbS \times BKSF \times IR_S \times AF_S \times EF_S) / AT$$

$$PbB_{adult,0.95} = PbB_{adult,central} \times GSDi^{1.645}$$

$$PbB_{fetal,0.95} = PbB_{adult,0.95} \times R_{fetal/maternal}$$

Symbol	Input Parameter	Value
$PbB_{adult,0}$	Typical blood lead concentration	1.0 $\mu\text{g/dL}$
PbS	Average soil lead concentration	47 $\mu\text{g/g}$
$BKSF$	Biokinetic slope factor	0.4 $[\mu\text{g/dL}] / [\mu\text{g/day}]$
IR_S	Intake rate of soil	0.10 g/day
AF_S	Absolute absorption fraction	0.12 unitless
EF_S	Exposure frequency	90 days/year
AT	Averaging time	365 days/year
$GSDi$	Geometric standard deviation	1.8 unitless
$R_{fetal/maternal}$	Transfer factor	0.9 unitless

	Calculated Results	Value
$PbB_{adult,central}$	Blood lead level: Adult, central tendency	1.06 $\mu\text{g/dL}$
$PbB_{adult,0.95}$	Blood lead level: Adult, 95th Percentile	2.78 $\mu\text{g/dL}$
$PbB_{fetal,0.95}$	Blood lead level: Fetus, 95th Percentile	2.50 $\mu\text{g/dL}$

TABLE 5-11
NONCANCER HAZARD INDEX AND THEORETICAL EXCESS
LIFETIME CANCER RISK FOR THE OUTDOOR WORKER -
EASTERN AREA
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituent	Noncancer Hazard Index	Potential Cancer Risk
Volatile Organics		
1,2,4-Trimethylbenzene	0.0027	NA
Ethylbenzene	0.00032	2.39E-07
Naphthalene	0.00011	3.57E-09
Tetrachloroethene	0.0016	6.06E-09
Total xylenes	0.0086	NA
Trichloroethene	0.0028	9.48E-09
Vinyl Chloride	0.00004	9.79E-09
Semi-Volatile Organics		
Benzo(a)pyrene	NA	6.01E-07
Inorganics		
Arsenic	0.012	1.94E-06
Pathway Summary	0.028	2.80E-06

Notes:
 NA = Toxicity values are not available for this endpoint

TABLE 5-12
NONCANCER HAZARD INDEX AND THEORETICAL EXCESS
LIFETIME CANCER RISK FOR THE CONSTRUCTION WORKER -
EASTERN AREA
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituent	Noncancer Hazard Index	Potential Cancer Risk
Volatile Organics		
1,2,4-Trimethylbenzene	0.0027	NA
Ethylbenzene	0.0021	2.12E-07
Naphthalene	0.00078	1.13E-09
Tetrachloroethene	0.069	1.04E-08
Total xylenes	0.069	NA
Trichloroethene	0.082	1.01E-08
Vinyl Chloride	0.0008	6.13E-09
Semi-Volatile Organics		
Benzo(a)pyrene	NA	2.38E-08
Inorganics		
Arsenic	0.018	9.01E-08
Pathway Summary	0.25	3.54E-07

Notes:
 NA = Toxicity values are not available for this endpoint

TABLE 5-13
NONCANCER HAZARD INDEX AND THEORETICAL EXCESS
LIFETIME CANCER RISK FOR THE INDOOR WORKER -
EASTERN AREA
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituent	Noncancer Hazard Index	Potential Cancer Risk
Volatile Organics		
1,1-Dichloroethane	NA	2.35E-09
Ethylbenzene	0.0000019	1.68E-09
Tetrachloroethene	0.0026	9.84E-09
Trichloroethene	0.019	5.68E-08
Vinyl chloride	0.000046	7.28E-09
Pathway Summary	0.022	7.79E-08

Notes:
 NA = Toxicity values are not available for this endpoint

TABLE 5-14
CALCULATED BLOOD LEAD CONCENTRATIONS FOR THE OUTDOOR
WORKER EXPOSED TO SURFACE SOIL IN THE EASTERN AREA
Clean Harbors Kansas, LLC - Wichita, Kansas

Equations:

$$PbB_{adult,central} = PbB_{adult,0} + (PbS \times BKSF \times IR_S \times AF_S \times EF_S) / AT$$

$$PbB_{adult,0.95} = PbB_{adult,central} \times GSDi^{1.645}$$

$$PbB_{fetal,0.95} = PbB_{adult,0.95} \times R_{fetal/maternal}$$

Symbol	Input Parameter	Value
$PbB_{adult,0}$	Typical blood lead concentration	1.0 $\mu\text{g/dL}$
PbS	Average soil lead concentration	130 $\mu\text{g/g}$
BKSF	Biokinetic slope factor	0.4 [$\mu\text{g/dL}$] / [$\mu\text{g/day}$]
IR_S	Intake rate of soil	0.10 g/day
AF_S	Absolute absorption fraction	0.12 unitless
EF_S	Exposure frequency	225 days/year
AT	Averaging time	365 days/year
GSDi	Geometric standard deviation	1.8 unitless
$R_{fetal/maternal}$	Transfer factor	0.9 unitless

	Calculated Results	Value
$PbB_{adult,central}$	Blood lead level: Adult, central tendency	1.38 $\mu\text{g/dL}$
$PbB_{adult,0.95}$	Blood lead level: Adult, 95th Percentile	3.6 $\mu\text{g/dL}$
$PbB_{fetal,0.95}$	Blood lead level: Fetus, 95th Percentile	3.3 $\mu\text{g/dL}$

TABLE 5-15
CALCULATED BLOOD LEAD CONCENTRATIONS FOR THE CONSTRUCTION
WORKER EXPOSED TO SURFACE AND SUBSURFACE SOIL IN THE EASTERN AREA
Clean Harbors Kansas, LLC - Wichita, Kansas

Equations:

$$PbB_{adult,central} = PbB_{adult,0} + (PbS \times BKSF \times IR_S \times AF_S \times EF_S) / AT$$

$$PbB_{adult,0.95} = PbB_{adult,central} \times GSDi^{1.645}$$

$$PbB_{fetal,0.95} = PbB_{adult,0.95} \times R_{fetal/maternal}$$

Symbol	Input Parameter	Value
$PbB_{adult,0}$	Typical blood lead concentration	1.0 $\mu\text{g/dL}$
PbS	Average soil lead concentration	193 $\mu\text{g/g}$
BKSF	Biokinetic slope factor	0.4 $[\mu\text{g/dL}] / [\mu\text{g/day}]$
IR_S	Intake rate of soil	0.10 g/day
AF_S	Absolute absorption fraction	0.12 unitless
EF_S	Exposure frequency	90 days/year
AT	Averaging time	365 days/year
GSDi	Geometric standard deviation	1.8 unitless
$R_{fetal/maternal}$	Transfer factor	0.9 unitless

	Calculated Results	Value
$PbB_{adult,central}$	Blood lead level: Adult, central tendency	1.23 $\mu\text{g/dL}$
$PbB_{adult,0.95}$	Blood lead level: Adult, 95th Percentile	3.23 $\mu\text{g/dL}$
$PbB_{fetal,0.95}$	Blood lead level: Fetus, 95th Percentile	2.91 $\mu\text{g/dL}$

TABLE 5-16

NONCANCER HAZARD INDEX AND THEORETICAL EXCESS
LIFETIME CANCER RISK FOR THE RECREATIONAL ADULT
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituent	Noncancer Hazard Index	Potential Cancer Risk
Semi-Volatile Organics		
Benzo(a)pyrene	NA	4.43E-08
Inorganics		
Arsenic	0.0028	5.46E-07
Pathway Summary	0.0028	5.91E-07

Notes:

NA = Toxicity values are not available for this endpoint

TABLE 5-17
NONCANCER HAZARD INDEX AND THEORETICAL EXCESS
LIFETIME CANCER RISK FOR THE RECREATIONAL YOUTH
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituent	Noncancer Hazard Index	Potential Cancer Risk
Semi-Volatile Organics		
Benzo(a)pyrene	NA	9.14E-08
Inorganics		
Arsenic	0.0051	3.31E-07
Pathway Summary	0.0051	4.22E-07

Notes:
NA = Toxicity values are not available for this endpoint

TABLE 5-18
CALCULATED BLOOD LEAD CONCENTRATIONS FOR THE RECREATIONAL ADULT
EXPOSED TO SEDIMENT
Clean Harbors Kansas, LLC - Wichita, Kansas

Equations:

$$PbB_{adult,central} = PbB_{adult,0} + (PbS \times BKSF \times IR_S \times AF_S \times EF_S) / AT$$

$$PbB_{adult,0.95} = PbB_{adult,central} \times GSDi^{1.645}$$

$$PbB_{fetal,0.95} = PbB_{adult,0.95} \times R_{fetal/maternal}$$

Symbol	Input Parameter	Value
$PbB_{adult,0}$	Typical blood lead concentration	1.0 µg/dL
PbS	Average sediment lead concentration	323 µg/g
BKSF	Biokinetic slope factor	0.4 [µg/dL] / [µg/day]
IR_S	Intake rate of sediment	0.10 g/day
AF_S	Absolute absorption fraction	0.12 unitless
EF_S	Exposure frequency	39 days/year
AT	Averaging time	365 days/year
GSDi	Geometric standard deviation	1.8 unitless
$R_{fetal/maternal}$	Transfer factor	0.9 unitless

	Calculated Results	Value
$PbB_{adult,central}$	Blood lead level: Adult, central tendency	1.17 µg/dL
$PbB_{adult,0.95}$	Blood lead level: Adult, 95th Percentile	3.1 µg/dL
$PbB_{fetal,0.95}$	Blood lead level: Fetus, 95th Percentile	2.8 µg/dL

TABLE 5-19
CALCULATED BLOOD LEAD CONCENTRATIONS FOR THE RECREATIONAL YOUTH
EXPOSED TO SEDIMENT
Clean Harbors Kansas, LLC - Wichita, Kansas

Equations:

$$PbB_{adult,central} = PbB_{adult,0} + (PbS \times BKSF \times IR_S \times AF_S \times EF_S) / AT$$

$$PbB_{adult,0.95} = PbB_{adult,central} \times GSDi^{1.645}$$

$$PbB_{fetal,0.95} = PbB_{adult,0.95} \times R_{fetal/maternal}$$

Symbol	Input Parameter	Value
PbB _{adult,0}	Typical blood lead concentration	1.0 µg/dL
PbS	Average sediment lead concentration	323 µg/g
BKSF	Biokinetic slope factor	0.4 [µg/dL] / [µg/day]
IR _S	Intake rate of sediment	0.10 g/day
AF _S	Absolute absorption fraction	0.12 unitless
EF _S	Exposure frequency	39 days/year
AT	Averaging time	365 days/year
GSDi	Geometric standard deviation	1.8 unitless
R _{fetal/maternal}	Transfer factor	0.9 unitless

	Calculated Results	Value
PbB _{adult,central}	Blood lead level: Adult, central tendency	1.17 µg/dL
PbB _{adult,0.95}	Blood lead level: Adult, 95th Percentile	3.1 µg/dL
PbB _{fetal,0.95}	Blood lead level: Fetus, 95th Percentile	2.8 µg/dL

Risk-Based Remedies

RBR Consulting, Inc.

APPENDIX A

ANALYTICAL DATA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Constituent	Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-1-0.5 0.5 10/2/2013 Investigation Eastern Area A-10 Surface	A10-10-10 10 12/19/2013 Investigation Eastern Area A-10 Subsurface	A10-10-15 15 12/19/2013 Investigation Eastern Area A-10 Subsurface	A10-10-2 2 12/18/2013 Investigation Eastern Area A-10 Surface	A10-10-5 5 12/18/2013 Investigation Eastern Area A-10 Subsurface	A10-1-10 10 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-11-2 2 12/18/2013 Investigation Eastern Area A-10 Surface
Volatile Organics (mg/kg)								
1,1,1,2-Tetrachloroethane	630206	NA	NA	NA	NA	NA	< 0.0048	NA
1,1,1-Trichloroethane	71556	NA	NA	NA	NA	NA	0.0027	NA
1,1,2,2-Tetrachloroethane	79345	NA	NA	NA	NA	NA	< 0.0048	NA
1,1,2-Trichloroethane	79005	NA	NA	NA	NA	NA	< 0.0048	NA
1,1-Dichloroethane	75343	NA	NA	NA	NA	NA	0.0071	NA
1,1-Dichloroethene	75354	NA	NA	NA	NA	NA	< 0.0048	NA
1,1-Dichloropropene	563586	NA	NA	NA	NA	NA	< 0.0048	NA
1,2,3-Trichlorobenzene	87616	NA	NA	NA	NA	NA	< 0.0048	NA
1,2,3-Trichloropropane	96184	NA	NA	NA	NA	NA	< 0.0048	NA
1,2,4-Trichlorobenzene	120821	NA	NA	NA	NA	NA	< 0.0048	NA
1,2,4-Trimethylbenzene	95636	NA	NA	NA	NA	NA	< 0.0048	NA
1,2-Dibromoethane	106934	NA	NA	NA	NA	NA	< 0.0048	NA
1,2-Dichlorobenzene	95501	NA	NA	NA	NA	NA	< 0.0048	NA
1,2-Dichloroethane	107062	NA	NA	NA	NA	NA	< 0.0048	NA
1,2-Dichloroethene, Total	540590	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	78875	NA	NA	NA	NA	NA	< 0.0048	NA
1,3,5-Trimethylbenzene	108678	NA	NA	NA	NA	NA	< 0.0048	NA
1,3-Dichlorobenzene	541731	NA	NA	NA	NA	NA	< 0.0048	NA
1,3-Dichloropropane	142289	NA	NA	NA	NA	NA	< 0.0048	NA
1,4-Dichlorobenzene	106467	NA	NA	NA	NA	NA	< 0.0048	NA
1,4-Dioxane	123911	NA	NA	NA	NA	NA	< 0.19	NA
2,2-Dichloropropane	594207	NA	NA	NA	NA	NA	< 0.0048	NA
2-Butanone	78933	NA	NA	NA	NA	NA	< 0.024	NA
2-Chloroethyl Vinyl Ether	110758	NA	NA	NA	NA	NA	< 0.024	NA
2-Chlorotoluene	95498	NA	NA	NA	NA	NA	< 0.0048	NA
2-Hexanone (methyl butyl ketone)	591786	NA	NA	NA	NA	NA	< 0.024	NA
3-Chloro-1,2-Dibromopropane	96128	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	106434	NA	NA	NA	NA	NA	< 0.0048	NA
4-Isopropyltoluene	99876	NA	NA	NA	NA	NA	< 0.0048	NA
4-Methyl-2-Pentanone	108101	NA	NA	NA	NA	NA	< 0.024	NA
Acetone	67641	NA	NA	NA	NA	NA	< 0.048	NA
Acrolein	107028	NA	NA	NA	NA	NA	< 0.024	NA
Acrylonitrile	107131	NA	NA	NA	NA	NA	< 0.024	NA
Benzene	71432	NA	NA	NA	NA	NA	< 0.0048	NA
Bromobenzene	108861	NA	NA	NA	NA	NA	< 0.0048	NA
Bromochloromethane	74975	NA	NA	NA	NA	NA	< 0.0048	NA
Bromodichloromethane	75274	NA	NA	NA	NA	NA	< 0.0048	NA
Bromoform	75252	NA	NA	NA	NA	NA	< 0.0048	NA
Bromomethane	74839	NA	NA	NA	NA	NA	< 0.0048	NA
Carbon Disulfide	75150	NA	NA	NA	NA	NA	< 0.0048	NA
Carbon Tetrachloride	56235	NA	NA	NA	NA	NA	< 0.0048	NA
Chlorobenzene	108907	NA	NA	NA	NA	NA	< 0.0048	NA
Dibromochloromethane	124481	NA	NA	NA	NA	NA	< 0.0048	NA

Risk-Based Remedies
RBR Consulting, Inc.

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-1-0.5	A10-10-10	A10-10-15	A10-10-2	A10-10-5	A10-1-10	A10-11-2
Sample Depth	0.5	10	15	2	5	10	2
Date Collected	10/2/2013	12/19/2013	12/19/2013	12/18/2013	12/18/2013	10/2/2013	12/18/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Surface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Surface
Constituent	CAS No.						
Volatile Organics (mg/kg) (continued)							
Chloroethane	75003	NA	NA	NA	NA	< 0.0048	NA
Chloroform	67663	NA	NA	NA	NA	< 0.0048	NA
Chloromethane	74873	NA	NA	NA	NA	< 0.0048	NA
Cis-1,2-Dichloroethene	156592	NA	NA	NA	NA	< 0.0048	NA
Cis-1,3-Dichloropropene	10061015	NA	NA	NA	NA	< 0.0048	NA
Dibromomethane	74953	NA	NA	NA	NA	< 0.0048	NA
Dichlorodifluoromethane	75718	NA	NA	NA	NA	< 0.0048	NA
Ethylbenzene	100414	NA	NA	NA	NA	< 0.0048	NA
Hexachlorobutadiene	87683	NA	NA	NA	NA	< 0.0048	NA
Isopropylbenzene	98828	NA	NA	NA	NA	< 0.0048	NA
M,P-Xylenes	179601231	NA	NA	NA	NA	< 0.0096	NA
Methyl Tert-Butyl Ether	1634044	NA	NA	NA	NA	< 0.0048	NA
Methylene Chloride	75092	NA	NA	NA	NA	< 0.0096	NA
Naphthalene	91203	NA	NA	NA	NA	< 0.0048	NA
N-Butylbenzene	104518	NA	NA	NA	NA	< 0.0048	NA
N-Propylbenzene	103651	NA	NA	NA	NA	< 0.0048	NA
O-Xylene	95476	NA	NA	NA	NA	< 0.0048	NA
Sec-Butylbenzene	135988	NA	NA	NA	NA	< 0.0048	NA
Styrene	100425	NA	NA	NA	NA	< 0.0048	NA
Tert-Butylbenzene	98066	NA	NA	NA	NA	< 0.0048	NA
Tetrachloroethene	127184	NA	NA	NA	NA	0.0206	NA
Toluene	108883	NA	NA	NA	NA	< 0.0048	NA
Total Xylenes	1330207	NA	NA	NA	NA	< 0.0096	NA
Trans-1,2-Dichloroethene	156605	NA	NA	NA	NA	< 0.0048	NA
Trans-1,3-Dichloropropene	10061026	NA	NA	NA	NA	< 0.0048	NA
Trichloroethene	79016	NA	NA	NA	NA	0.0139	NA
Trichlorofluoromethane	75694	NA	NA	NA	NA	< 0.0048	NA
Vinyl Acetate	108054	NA	NA	NA	NA	< 0.024	NA
Vinyl Chloride	75014	NA	NA	NA	NA	< 0.0048	NA
Dibromochloropropane (DBCP)	67708832	NA	NA	NA	NA	< 0.0048	NA
VOCs - Method 3810 Mod							
Benzene	71432	NA	< 0.0084 J	< 0.0084 J	< 0.0084 J	< 0.0084 J	NA
Cis-1,2-Dichloroethene	156592	NA	< 0.0084 J	< 0.0084 J	< 0.0084 J	< 0.0084 J	NA
Ethylbenzene	100414	NA	< 0.0084 J	< 0.0084 J	< 0.0084 J	< 0.0084 J	NA
Tetrachloroethene	127184	NA	0.113 J	0.0468 J	0.238 J	0.235 J	NA
Toluene	108883	NA	< 0.0084 J	< 0.0084 J	< 0.0084 J	< 0.0084 J	NA
Trichloroethene	79016	NA	< 0.0084 J	< 0.0084 J	< 0.0084 J	< 0.0084 J	NA
Total Xylenes	1330207	NA	< 0.0084 J	< 0.0084 J	< 0.0084 J	< 0.0084 J	NA

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-1-0.5	A10-10-10	A10-10-15	A10-10-2	A10-10-5	A10-1-10	A10-11-2
Sample Depth	0.5	10	15	2	5	10	2
Date Collected	10/2/2013	12/19/2013	12/19/2013	12/18/2013	12/18/2013	10/2/2013	12/18/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Surface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Surface
Constituent	CAS No.						
Semi-Volatile Organics (mg/kg)							
1,2,4-Trichlorobenzene	120821	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95501	NA	NA	NA	NA	NA	NA
1,2-Diphenylhydrazine	122667	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541731	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106467	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene	90120	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	95954	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	88062	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	120832	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	105679	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	51285	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	121142	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	606202	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	91587	NA	NA	NA	NA	NA	NA
2-Chlorophenol	95578	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	91576	NA	NA	NA	NA	NA	NA
2-Methylphenol	95487	NA	NA	NA	NA	NA	NA
2-Nitroaniline	88744	NA	NA	NA	NA	NA	NA
2-Nitrophenol	88755	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	91941	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99092	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-Methylphenol	534521	NA	NA	NA	NA	NA	NA
4-Bromophenyl Phenyl Ether	101553	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	59507	NA	NA	NA	NA	NA	NA
4-Chloroaniline	106478	NA	NA	NA	NA	NA	NA
4-Chlorophenyl Phenyl Ether	7005723	NA	NA	NA	NA	NA	NA
4-Nitroaniline	100016	NA	NA	NA	NA	NA	NA
4-Nitrophenol	100027	NA	NA	NA	NA	NA	NA
Acenaphthene	83329	NA	NA	NA	NA	NA	NA
Acenaphthylene	208968	NA	NA	NA	NA	NA	NA
Aniline	62533	NA	NA	NA	NA	NA	NA
Anthracene	120127	NA	NA	NA	NA	NA	NA
Benzidine	92875	NA	NA	NA	NA	NA	NA
Benzo(A)Anthracene	56553	NA	NA	NA	NA	NA	NA
Benzo(A)Pyrene	50328	NA	NA	NA	NA	NA	NA
Benzo(B)Fluoranthene	205992	NA	NA	NA	NA	NA	NA
Benzo(G,H,I)Perylene	191242	NA	NA	NA	NA	NA	NA
Benzo(K)Fluoranthene	207089	NA	NA	NA	NA	NA	NA
Benzoic Acid	65850	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	100516	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethoxy)Methane	111911	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethyl)Ether	111444	NA	NA	NA	NA	NA	NA
Bis(2-Chloroisopropyl)Ether	108601	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-1-0.5	A10-10-10	A10-10-15	A10-10-2	A10-10-5	A10-1-10	A10-11-2
Sample Depth	0.5	10	15	2	5	10	2
Date Collected	10/2/2013	12/19/2013	12/19/2013	12/18/2013	12/18/2013	10/2/2013	12/18/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Surface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Surface
Constituent	CAS No.						
Semi-Volatile Organics (mg/kg) (continued)							
Bis(2-Ethylhexyl) Phthalate	117817	NA	NA	NA	NA	NA	NA
Butyl Benzyl Phthalate	85687	NA	NA	NA	NA	NA	NA
Carbazole	86748	NA	NA	NA	NA	NA	NA
Chrysene	218019	NA	NA	NA	NA	NA	NA
Dibenz(A,H)Anthracene	53703	NA	NA	NA	NA	NA	NA
Dibenzofuran	132649	NA	NA	NA	NA	NA	NA
Diethyl Phthalate	84662	NA	NA	NA	NA	NA	NA
Dimethyl Phthalate	131113	NA	NA	NA	NA	NA	NA
Di-N-Butyl Phthalate	84742	NA	NA	NA	NA	NA	NA
Di-N-Octyl Phthalate	117840	NA	NA	NA	NA	NA	NA
Fluoranthene	206440	NA	NA	NA	NA	NA	NA
Fluorene	86737	NA	NA	NA	NA	NA	NA
Hexachloro-1,3-Cyclopentadiene	77474	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	118741	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	87683	NA	NA	NA	NA	NA	NA
Hexachloroethane	67721	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-Cd)Pyrene	193395	NA	NA	NA	NA	NA	NA
Isophorone	78591	NA	NA	NA	NA	NA	NA
M-,P-Cresol Mixture	15831104	NA	NA	NA	NA	NA	NA
Naphthalene	91203	NA	NA	NA	NA	NA	NA
Nitrobenzene	98953	NA	NA	NA	NA	NA	NA
N-Nitrosodimethylamine	62759	NA	NA	NA	NA	NA	NA
N-Nitrosodi-N-Propylamine	621647	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	86306	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Phenanthrene	85018	NA	NA	NA	NA	NA	NA
Phenol	108952	NA	NA	NA	NA	NA	NA
Pyrene	129000	NA	NA	NA	NA	NA	NA
Pyridine	110861	NA	NA	NA	NA	NA	NA
PCBs (mg/kg)							
Pcb- 1016	12674112	NA	NA	NA	NA	NA	NA
Pcb- 1221	11104282	NA	NA	NA	NA	NA	NA
Pcb- 1232	11141165	NA	NA	NA	NA	NA	NA
Pcb- 1242	53469219	NA	NA	NA	NA	NA	NA
Pcb- 1248	12672296	NA	NA	NA	NA	NA	NA
Pcb- 1254	11097691	NA	NA	NA	NA	NA	NA
Pcb- 1260	11096825	NA	NA	NA	NA	NA	NA
Total Petroleum Hydrocarbons (TPH) (mg/kg)							
DRO (C10-C28) Range	DRO	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-1-0.5	A10-10-10	A10-10-15	A10-10-2	A10-10-5	A10-1-10	A10-11-2
Sample Depth	0.5	10	15	2	5	10	2
Date Collected	10/2/2013	12/19/2013	12/19/2013	12/18/2013	12/18/2013	10/2/2013	12/18/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Surface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Surface
CAS No.							
Constituent							
Herbicides/Pesticides (mg/kg)							
2,4,5-T	93765	NA	NA	NA	NA	NA	NA
2,4-D	94757	NA	NA	NA	NA	NA	NA
2,4-Db	94826	NA	NA	NA	NA	NA	NA
4,4'-DDD	72548	NA	NA	NA	NA	NA	NA
4,4'-DDE	72559	NA	NA	NA	NA	NA	NA
4,4'-DDT	50293	NA	NA	NA	NA	NA	NA
Aldrin	309002	NA	NA	NA	NA	NA	NA
Alpha-BHC	319846	NA	NA	NA	NA	NA	NA
Beta-BHC	319857	NA	NA	NA	NA	NA	NA
Delta-BHC	319868	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	5103719	NA	NA	NA	NA	NA	NA
Dalapon	75990	NA	NA	NA	NA	NA	NA
Dicamba	1918009	NA	NA	NA	NA	NA	NA
Dichoroprop	120365	NA	NA	NA	NA	NA	NA
Dieldrin	60571	NA	NA	NA	NA	NA	NA
Dinoseb	88857	NA	NA	NA	NA	NA	NA
Endosulfan I	959988	NA	NA	NA	NA	NA	NA
Endosulfan II	33213659	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	1031078	NA	NA	NA	NA	NA	NA
Endrin	72208	NA	NA	NA	NA	NA	NA
Endrin aldehyde	7421934	NA	NA	NA	NA	NA	NA
Endrin ketone	53494705	NA	NA	NA	NA	NA	NA
Gamma-BHC	58899	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	5103742	NA	NA	NA	NA	NA	NA
Heptachlor	76448	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024573	NA	NA	NA	NA	NA	NA
Mcpa	94746	NA	NA	NA	NA	NA	NA
Mcpp	93652	NA	NA	NA	NA	NA	NA
Methoxychlor	72435	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Silvex (2,4,5-TP)	93721	NA	NA	NA	NA	NA	NA
Toxaphene	8001352	NA	NA	NA	NA	NA	NA
Total Metals (mg/kg)							
Aluminum	7429905	NA	NA	NA	NA	NA	NA
Antimony	7440360	NA	NA	NA	NA	NA	NA
Arsenic	7440382	4.5	NA	NA	NA	2.4	NA
Barium	7440393	166	NA	NA	NA	64.400002	NA
Beryllium	7440417	NA	NA	NA	NA	NA	NA
Boron	7440428	NA	NA	NA	NA	NA	NA
Cadmium	7440439	3.1	NA	NA	NA	< 0.22	NA
Calcium	7440702	NA	NA	NA	NA	NA	NA
Chromium	7440473	90.800003	NA	NA	NA	5.5	NA
Cobalt	7440484	NA	NA	NA	NA	NA	NA

Risk-Based Remedies
RBR Consulting, Inc.

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-1-0.5	A10-10-10	A10-10-15	A10-10-2	A10-10-5	A10-1-10	A10-11-2
Sample Depth	0.5	10	15	2	5	10	2
Date Collected	10/2/2013	12/19/2013	12/19/2013	12/18/2013	12/18/2013	10/2/2013	12/18/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Surface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Surface
Constituent	CAS No.						
Total Metals (mg/kg) (continued)							
Copper	7440508	NA	NA	NA	NA	NA	NA
Iron	7439896	NA	NA	NA	NA	NA	NA
Lead	7439921	NA	NA	NA	NA	7.5	NA
Lithium	7439932	NA	NA	NA	NA	NA	NA
Manganese	7439965	NA	NA	NA	NA	NA	NA
Magnesium	7439954	NA	NA	NA	NA	NA	NA
Mercury	7439976	0.64	NA	NA	NA	< 0.049	NA
Molybdenum	7439987	NA	NA	NA	NA	NA	NA
Nickel	7440020	NA	NA	NA	NA	NA	NA
Potassium	7440097	NA	NA	NA	NA	NA	NA
Selenium	7782492	< 3.7	NA	NA	NA	< 1.1	NA
Silver	7440224	< 1.8	NA	NA	NA	< 0.56	NA
Sodium	7440235	NA	NA	NA	NA	NA	NA
Strontium	7440246	NA	NA	NA	NA	NA	NA
Thallium	7440280	NA	NA	NA	NA	NA	NA
Tin	7440315	NA	NA	NA	NA	NA	NA
Titanium	7440326	NA	NA	NA	NA	NA	NA
Vanadium	7440622	NA	NA	NA	NA	NA	NA
Zinc	7440666	NA	NA	NA	NA	NA	NA
Other Parameters							
PH	PH	NA	NA	NA	NA	NA	NA
Total Organic Carbon	1012	NA	NA	NA	NA	NA	NA

Notes:
 NA - Not Analyzed.
 J - Estimated value.
 R- Rejected value.

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Constituent	Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-11-5 5 12/18/2013 Investigation Eastern Area A-10 Subsurface	A10-11-15 15 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-1-2 2 10/2/2013 Investigation Eastern Area A-10 Surface	A10-12-10 10 12/19/2013 Investigation Eastern Area A-10 Subsurface	A10-12-15 15 12/19/2013 Investigation Eastern Area A-10 Subsurface	A10-12-5 5 12/19/2013 Investigation Eastern Area A-10 Subsurface	A10-13-10 10 12/19/2013 Investigation Eastern Area A-10 Subsurface
Volatile Organics (mg/kg)								
1,1,1,2-Tetrachloroethane	630206	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
1,1,1-Trichloroethane	71556	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	79345	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
1,1,2-Trichloroethane	79005	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
1,1-Dichloroethane	75343	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
1,1-Dichloroethene	75354	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
1,1-Dichloropropene	563586	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
1,2,3-Trichlorobenzene	87616	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
1,2,3-Trichloropropane	96184	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
1,2,4-Trichlorobenzene	120821	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
1,2,4-Trimethylbenzene	95636	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
1,2-Dibromoethane	106934	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
1,2-Dichlorobenzene	95501	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
1,2-Dichloroethane	107062	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
1,2-Dichloroethene, Total	540590	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	78875	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
1,3,5-Trimethylbenzene	108678	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
1,3-Dichlorobenzene	541731	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
1,3-Dichloropropane	142289	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
1,4-Dichlorobenzene	106467	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
1,4-Dioxane	123911	NA	< 0.17	< 0.21	NA	NA	NA	NA
2,2-Dichloropropane	594207	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
2-Butanone	78933	NA	< 0.021	< 0.026	NA	NA	NA	NA
2-Chloroethyl Vinyl Ether	110758	NA	< 0.021	< 0.026	NA	NA	NA	NA
2-Chlorotoluene	95498	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
2-Hexanone (methyl butyl ketone)	591786	NA	< 0.021	< 0.026	NA	NA	NA	NA
3-Chloro-1,2-Dibromopropane	96128	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	106434	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
4-Isopropyltoluene	99876	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
4-Methyl-2-Pentanone	108101	NA	< 0.021	< 0.026	NA	NA	NA	NA
Acetone	67641	NA	< 0.042	< 0.052	NA	NA	NA	NA
Acrolein	107028	NA	< 0.021	< 0.026	NA	NA	NA	NA
Acrylonitrile	107131	NA	< 0.021	< 0.026	NA	NA	NA	NA
Benzene	71432	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
Bromobenzene	108861	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
Bromochloromethane	74975	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
Bromodichloromethane	75274	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
Bromoform	75252	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
Bromomethane	74839	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
Carbon Disulfide	75150	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
Carbon Tetrachloride	56235	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
Chlorobenzene	108907	NA	< 0.0042	< 0.0052	NA	NA	NA	NA
Dibromochloromethane	124481	NA	< 0.0042	< 0.0052	NA	NA	NA	NA

Risk-Based Remedies
RBR Consulting, Inc.

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-11-5	A10-1-15	A10-1-2	A10-12-10	A10-12-15	A10-12-5	A10-13-10
Sample Depth	5	15	2	10	15	5	10
Date Collected	12/18/2013	10/2/2013	10/2/2013	12/19/2013	12/19/2013	12/19/2013	12/19/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Subsurface	Subsurface
Constituent	CAS No.						
Volatile Organics (mg/kg) (continued)							
Chloroethane	75003	NA	< 0.0042	< 0.0052	NA	NA	NA
Chloroform	67663	NA	< 0.0042	< 0.0052	NA	NA	NA
Chloromethane	74873	NA	< 0.0042	< 0.0052	NA	NA	NA
Cis-1,2-Dichloroethene	156592	NA	< 0.0042	< 0.0052	NA	NA	NA
Cis-1,3-Dichloropropene	10061015	NA	< 0.0042	< 0.0052	NA	NA	NA
Dibromomethane	74953	NA	< 0.0042	< 0.0052	NA	NA	NA
Dichlorodifluoromethane	75718	NA	< 0.0042	< 0.0052	NA	NA	NA
Ethylbenzene	100414	NA	< 0.0042	< 0.0052	NA	NA	NA
Hexachlorobutadiene	87683	NA	< 0.0042	< 0.0052	NA	NA	NA
Isopropylbenzene	98828	NA	< 0.0042	< 0.0052	NA	NA	NA
M,P-Xylenes	179601231	NA	< 0.0085	< 0.01	NA	NA	NA
Methyl Tert-Butyl Ether	1634044	NA	< 0.0042	< 0.0052	NA	NA	NA
Methylene Chloride	75092	NA	< 0.0085	< 0.01	NA	NA	NA
Naphthalene	91203	NA	< 0.0042	< 0.0052	NA	NA	NA
N-Butylbenzene	104518	NA	< 0.0042	< 0.0052	NA	NA	NA
N-Propylbenzene	103651	NA	< 0.0042	< 0.0052	NA	NA	NA
O-Xylene	95476	NA	< 0.0042	< 0.0052	NA	NA	NA
Sec-Butylbenzene	135988	NA	< 0.0042	< 0.0052	NA	NA	NA
Styrene	100425	NA	< 0.0042	< 0.0052	NA	NA	NA
Tert-Butylbenzene	98066	NA	< 0.0042	< 0.0052	NA	NA	NA
Tetrachloroethene	127184	NA	0.0027	J 0.0054	NA	NA	NA
Toluene	108883	NA	< 0.0042	< 0.0052	NA	NA	NA
Total Xylenes	1330207	NA	< 0.0085	< 0.01	NA	NA	NA
Trans-1,2-Dichloroethene	156605	NA	< 0.0042	< 0.0052	NA	NA	NA
Trans-1,3-Dichloropropene	10061026	NA	< 0.0042	< 0.0052	NA	NA	NA
Trichloroethene	79016	NA	< 0.0042	< 0.015	NA	NA	NA
Trichlorofluoromethane	75694	NA	< 0.0042	< 0.0052	NA	NA	NA
Vinyl Acetate	108054	NA	< 0.021	< 0.026	NA	NA	NA
Vinyl Chloride	75014	NA	< 0.0042	< 0.0052	NA	NA	NA
Dibromochloropropane (DBCP)	67708832	NA	< 0.0042	< 0.0052	NA	NA	NA
VOCs - Method 3810 Mod							
Benzene	71432	< 0.0084	J NA	NA	< 0.0084	J < 0.0084	J < 0.0084
Cis-1,2-Dichloroethene	156592	< 0.0084	J NA	NA	< 0.0084	J < 0.0084	J < 0.0084
Ethylbenzene	100414	< 0.0084	J NA	NA	< 0.0084	J < 0.0084	J < 0.0084
Tetrachloroethene	127184	0.0491	J NA	NA	0.134	J < 0.0084	J 0.137
Toluene	108883	< 0.0084	J NA	NA	< 0.0084	J < 0.0084	J < 0.0084
Trichloroethene	79016	< 0.0084	J NA	NA	< 0.0084	J < 0.0084	J < 0.0084
Total Xylenes	1330207	< 0.0084	J NA	NA	< 0.0084	J < 0.0084	J < 0.0084

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-11-5	A10-1-15	A10-1-2	A10-12-10	A10-12-15	A10-12-5	A10-13-10
Sample Depth	5	15	2	10	15	5	10
Date Collected	12/18/2013	10/2/2013	10/2/2013	12/19/2013	12/19/2013	12/19/2013	12/19/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Subsurface	Subsurface
CAS No.							
Constituent							
Semi-Volatile Organics (mg/kg)							
1,2,4-Trichlorobenzene	120821	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95501	NA	NA	NA	NA	NA	NA
1,2-Diphenylhydrazine	122667	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541731	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106467	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene	90120	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	95954	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	88062	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	120832	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	105679	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	51285	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	121142	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	606202	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	91587	NA	NA	NA	NA	NA	NA
2-Chlorophenol	95578	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	91576	NA	NA	NA	NA	NA	NA
2-Methylphenol	95487	NA	NA	NA	NA	NA	NA
2-Nitroaniline	88744	NA	NA	NA	NA	NA	NA
2-Nitrophenol	88755	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	91941	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99092	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-Methylphenol	534521	NA	NA	NA	NA	NA	NA
4-Bromophenyl Phenyl Ether	101553	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	59507	NA	NA	NA	NA	NA	NA
4-Chloroaniline	106478	NA	NA	NA	NA	NA	NA
4-Chlorophenyl Phenyl Ether	7005723	NA	NA	NA	NA	NA	NA
4-Nitroaniline	100016	NA	NA	NA	NA	NA	NA
4-Nitrophenol	100027	NA	NA	NA	NA	NA	NA
Acenaphthene	83329	NA	NA	NA	NA	NA	NA
Acenaphthylene	208968	NA	NA	NA	NA	NA	NA
Aniline	62533	NA	NA	NA	NA	NA	NA
Anthracene	120127	NA	NA	NA	NA	NA	NA
Benzidine	92875	NA	NA	NA	NA	NA	NA
Benzo(A)Anthracene	56553	NA	NA	NA	NA	NA	NA
Benzo(A)Pyrene	50328	NA	NA	NA	NA	NA	NA
Benzo(B)Fluoranthene	205992	NA	NA	NA	NA	NA	NA
Benzo(G,H,I)Perylene	191242	NA	NA	NA	NA	NA	NA
Benzo(K)Fluoranthene	207089	NA	NA	NA	NA	NA	NA
Benzoic Acid	65850	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	100516	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethoxy)Methane	111911	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethyl)Ether	111444	NA	NA	NA	NA	NA	NA
Bis(2-Chloroisopropyl)Ether	108601	NA	NA	NA	NA	NA	NA

Risk-Based Remedies
RBR Consulting, Inc.

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-11-5	A10-1-15	A10-1-2	A10-12-10	A10-12-15	A10-12-5	A10-13-10
Sample Depth	5	15	2	10	15	5	10
Date Collected	12/18/2013	10/2/2013	10/2/2013	12/19/2013	12/19/2013	12/19/2013	12/19/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Subsurface	Subsurface
Constituent	CAS No.						
Semi-Volatile Organics (mg/kg) (continued)							
Bis(2-Ethylhexyl) Phthalate	117817	NA	NA	NA	NA	NA	NA
Butyl Benzyl Phthalate	85687	NA	NA	NA	NA	NA	NA
Carbazole	86748	NA	NA	NA	NA	NA	NA
Chrysene	218019	NA	NA	NA	NA	NA	NA
Dibenz(A,H)Anthracene	53703	NA	NA	NA	NA	NA	NA
Dibenzofuran	132649	NA	NA	NA	NA	NA	NA
Diethyl Phthalate	84662	NA	NA	NA	NA	NA	NA
Dimethyl Phthalate	131113	NA	NA	NA	NA	NA	NA
Di-N-Butyl Phthalate	84742	NA	NA	NA	NA	NA	NA
Di-N-Octyl Phthalate	117840	NA	NA	NA	NA	NA	NA
Fluoranthene	206440	NA	NA	NA	NA	NA	NA
Fluorene	86737	NA	NA	NA	NA	NA	NA
Hexachloro-1,3-Cyclopentadiene	77474	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	118741	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	87683	NA	NA	NA	NA	NA	NA
Hexachloroethane	67721	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-Cd)Pyrene	193395	NA	NA	NA	NA	NA	NA
Isophorone	78591	NA	NA	NA	NA	NA	NA
M-,P-Cresol Mixture	15831104	NA	NA	NA	NA	NA	NA
Naphthalene	91203	NA	NA	NA	NA	NA	NA
Nitrobenzene	98953	NA	NA	NA	NA	NA	NA
N-Nitrosodimethylamine	62759	NA	NA	NA	NA	NA	NA
N-Nitrosodi-N-Propylamine	621647	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	86306	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Phenanthrene	85018	NA	NA	NA	NA	NA	NA
Phenol	108952	NA	NA	NA	NA	NA	NA
Pyrene	129000	NA	NA	NA	NA	NA	NA
Pyridine	110861	NA	NA	NA	NA	NA	NA
PCBs (mg/kg)							
Pcb- 1016	12674112	NA	NA	NA	NA	NA	NA
Pcb- 1221	11104282	NA	NA	NA	NA	NA	NA
Pcb- 1232	11141165	NA	NA	NA	NA	NA	NA
Pcb- 1242	53469219	NA	NA	NA	NA	NA	NA
Pcb- 1248	12672296	NA	NA	NA	NA	NA	NA
Pcb- 1254	11097691	NA	NA	NA	NA	NA	NA
Pcb- 1260	11096825	NA	NA	NA	NA	NA	NA
Total Petroleum Hydrocarbons (TPH) (mg/kg)							
DRO (C10-C28) Range	DRO	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-11-5 5 12/18/2013 Investigation Eastern Area A-10 Subsurface	A10-1-15 15 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-1-2 2 10/2/2013 Investigation Eastern Area A-10 Surface	A10-12-10 10 12/19/2013 Investigation Eastern Area A-10 Subsurface	A10-12-15 15 12/19/2013 Investigation Eastern Area A-10 Subsurface	A10-12-5 5 12/19/2013 Investigation Eastern Area A-10 Subsurface	A10-13-10 10 12/19/2013 Investigation Eastern Area A-10 Subsurface
Constituent							
Herbicides/Pesticides (mg/kg)							
2,4,5-T	93765	NA	NA	NA	NA	NA	NA
2,4-D	94757	NA	NA	NA	NA	NA	NA
2,4-Db	94826	NA	NA	NA	NA	NA	NA
4,4'-DDD	72548	NA	NA	NA	NA	NA	NA
4,4'-DDE	72559	NA	NA	NA	NA	NA	NA
4,4'-DDT	50293	NA	NA	NA	NA	NA	NA
Aldrin	309002	NA	NA	NA	NA	NA	NA
Alpha-BHC	319846	NA	NA	NA	NA	NA	NA
Beta-BHC	319857	NA	NA	NA	NA	NA	NA
Delta-BHC	319868	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	5103719	NA	NA	NA	NA	NA	NA
Dalapon	75990	NA	NA	NA	NA	NA	NA
Dicamba	1918009	NA	NA	NA	NA	NA	NA
Dichoroprop	120365	NA	NA	NA	NA	NA	NA
Dieldrin	60571	NA	NA	NA	NA	NA	NA
Dinoseb	88857	NA	NA	NA	NA	NA	NA
Endosulfan I	959988	NA	NA	NA	NA	NA	NA
Endosulfan II	33213659	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	1031078	NA	NA	NA	NA	NA	NA
Endrin	72208	NA	NA	NA	NA	NA	NA
Endrin aldehyde	7421934	NA	NA	NA	NA	NA	NA
Endrin ketone	53494705	NA	NA	NA	NA	NA	NA
Gamma-BHC	58899	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	5103742	NA	NA	NA	NA	NA	NA
Heptachlor	76448	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024573	NA	NA	NA	NA	NA	NA
Mcpa	94746	NA	NA	NA	NA	NA	NA
Mcpp	93652	NA	NA	NA	NA	NA	NA
Methoxychlor	72435	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Silvex (2,4,5-TP)	93721	NA	NA	NA	NA	NA	NA
Toxaphene	8001352	NA	NA	NA	NA	NA	NA
Total Metals (mg/kg)							
Aluminum	7429905	NA	NA	NA	NA	NA	NA
Antimony	7440360	NA	NA	NA	NA	NA	NA
Arsenic	7440382	NA	0.94	2.3	NA	NA	NA
Barium	7440393	NA	14.3	31.6	NA	NA	NA
Beryllium	7440417	NA	NA	NA	NA	NA	NA
Boron	7440428	NA	NA	NA	NA	NA	NA
Cadmium	7440439	NA	< 0.19	8.1	NA	NA	NA
Calcium	7440702	NA	NA	NA	NA	NA	NA
Chromium	7440473	NA	1.8	22.9	NA	NA	NA
Cobalt	7440484	NA	NA	NA	NA	NA	NA

Risk-Based Remedies
RBR Consulting, Inc.

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-11-5	A10-1-15	A10-1-2	A10-12-10	A10-12-15	A10-12-5	A10-13-10
Sample Depth	5	15	2	10	15	5	10
Date Collected	12/18/2013	10/2/2013	10/2/2013	12/19/2013	12/19/2013	12/19/2013	12/19/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Subsurface	Subsurface
Constituent	CAS No.						
Total Metals (mg/kg) (continued)							
Copper	7440508	NA	NA	NA	NA	NA	NA
Iron	7439896	NA	NA	NA	NA	NA	NA
Lead	7439921	NA	2.2	712	NA	NA	NA
Lithium	7439932	NA	NA	NA	NA	NA	NA
Manganese	7439965	NA	NA	NA	NA	NA	NA
Magnesium	7439954	NA	NA	NA	NA	NA	NA
Mercury	7439976	NA	< 0.04	0.42	NA	NA	NA
Molybdenum	7439987	NA	NA	NA	NA	NA	NA
Nickel	7440020	NA	NA	NA	NA	NA	NA
Potassium	7440097	NA	NA	NA	NA	NA	NA
Selenium	7782492	NA	< 0.97	0.71	NA	NA	NA
Silver	7440224	NA	< 0.49	< 0.35	NA	NA	NA
Sodium	7440235	NA	NA	NA	NA	NA	NA
Strontium	7440246	NA	NA	NA	NA	NA	NA
Thallium	7440280	NA	NA	NA	NA	NA	NA
Tin	7440315	NA	NA	NA	NA	NA	NA
Titanium	7440326	NA	NA	NA	NA	NA	NA
Vanadium	7440622	NA	NA	NA	NA	NA	NA
Zinc	7440666	NA	NA	NA	NA	NA	NA
Other Parameters							
PH	PH	NA	NA	NA	NA	NA	NA
Total Organic Carbon	1012	NA	NA	NA	NA	NA	NA

Notes:
 NA - Not Analyzed.
 J - Estimated value.
 R- Rejected value.

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-13-15	A10-13-5	A10-14-2	A10-1-5	A10-15-10	A10-15-5	A10-16-2
Sample Depth	15	5	2	5	10	5	2
Date Collected	12/19/2013	12/19/2013	12/19/2013	10/2/2013	1/6/2014	1/6/2014	1/6/2014
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Subsurface	Surface
CAS No.							
Constituent							
Volatile Organics (mg/kg)							
1,1,1,2-Tetrachloroethane	630206	NA	NA	< 0.0045	NA	NA	NA
1,1,1-Trichloroethane	71556	NA	NA	< 0.0045	NA	NA	NA
1,1,2,2-Tetrachloroethane	79345	NA	NA	< 0.0045	NA	NA	NA
1,1,2-Trichloroethane	79005	NA	NA	< 0.0045	NA	NA	NA
1,1-Dichloroethane	75343	NA	NA	0.0057	NA	NA	NA
1,1-Dichloroethene	75354	NA	NA	< 0.0045	NA	NA	NA
1,1-Dichloropropene	563586	NA	NA	< 0.0045	NA	NA	NA
1,2,3-Trichlorobenzene	87616	NA	NA	< 0.0045	NA	NA	NA
1,2,3-Trichloropropane	96184	NA	NA	< 0.0045	NA	NA	NA
1,2,4-Trichlorobenzene	120821	NA	NA	< 0.0045	NA	NA	NA
1,2,4-Trimethylbenzene	95636	NA	NA	< 0.0045	NA	NA	NA
1,2-Dibromoethane	106934	NA	NA	< 0.0045	NA	NA	NA
1,2-Dichlorobenzene	95501	NA	NA	< 0.0045	NA	NA	NA
1,2-Dichloroethane	107062	NA	NA	< 0.0045	NA	NA	NA
1,2-Dichloroethene, Total	540590	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	78875	NA	NA	< 0.0045	NA	NA	NA
1,3,5-Trimethylbenzene	108678	NA	NA	< 0.0045	NA	NA	NA
1,3-Dichlorobenzene	541731	NA	NA	< 0.0045	NA	NA	NA
1,3-Dichloropropane	142289	NA	NA	< 0.0045	NA	NA	NA
1,4-Dichlorobenzene	106467	NA	NA	< 0.0045	NA	NA	NA
1,4-Dioxane	123911	NA	NA	< 0.18	NA	NA	NA
2,2-Dichloropropane	594207	NA	NA	< 0.0045	NA	NA	NA
2-Butanone	78933	NA	NA	< 0.022	NA	NA	NA
2-Chloroethyl Vinyl Ether	110758	NA	NA	< 0.022	NA	NA	NA
2-Chlorotoluene	95498	NA	NA	< 0.0045	NA	NA	NA
2-Hexanone (methyl butyl ketone)	591786	NA	NA	< 0.022	NA	NA	NA
3-Chloro-1,2-Dibromopropane	96128	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	106434	NA	NA	< 0.0045	NA	NA	NA
4-Isopropyltoluene	99876	NA	NA	< 0.0045	NA	NA	NA
4-Methyl-2-Pentanone	108101	NA	NA	< 0.022	NA	NA	NA
Acetone	67641	NA	NA	< 0.045	NA	NA	NA
Acrolein	107028	NA	NA	< 0.022	NA	NA	NA
Acrylonitrile	107131	NA	NA	< 0.022	NA	NA	NA
Benzene	71432	NA	NA	< 0.0045	NA	NA	NA
Bromobenzene	108861	NA	NA	< 0.0045	NA	NA	NA
Bromochloromethane	74975	NA	NA	< 0.0045	NA	NA	NA
Bromodichloromethane	75274	NA	NA	< 0.0045	NA	NA	NA
Bromoform	75252	NA	NA	< 0.0045	NA	NA	NA
Bromomethane	74839	NA	NA	< 0.0045	NA	NA	NA
Carbon Disulfide	75150	NA	NA	< 0.0045	NA	NA	NA
Carbon Tetrachloride	56235	NA	NA	< 0.0045	NA	NA	NA
Chlorobenzene	108907	NA	NA	< 0.0045	NA	NA	NA
Dibromochloromethane	124481	NA	NA	< 0.0045	NA	NA	NA

Risk-Based Remedies
RBR Consulting, Inc.

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-13-15	A10-13-5	A10-14-2	A10-1-5	A10-15-10	A10-15-5	A10-16-2
Sample Depth	15	5	2	5	10	5	2
Date Collected	12/19/2013	12/19/2013	12/19/2013	10/2/2013	1/6/2014	1/6/2014	1/6/2014
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Subsurface	Surface
Constituent	CAS No.						
Volatil Organic (mg/kg) (continued)							
Chloroethane	75003	NA	NA	NA	< 0.0045	NA	NA
Chloroform	67663	NA	NA	NA	< 0.0045	NA	NA
Chloromethane	74873	NA	NA	NA	< 0.0045	NA	NA
Cis-1,2-Dichloroethene	156592	NA	NA	NA	< 0.0048	NA	NA
Cis-1,3-Dichloropropene	10061015	NA	NA	NA	< 0.0045	NA	NA
Dibromomethane	74953	NA	NA	NA	< 0.0045	NA	NA
Dichlorodifluoromethane	75718	NA	NA	NA	< 0.0045	NA	NA
Ethylbenzene	100414	NA	NA	NA	< 0.0045	NA	NA
Hexachlorobutadiene	87683	NA	NA	NA	< 0.0045	NA	NA
Isopropylbenzene	98828	NA	NA	NA	< 0.0045	NA	NA
M,P-Xylenes	179601231	NA	NA	NA	< 0.009	NA	NA
Methyl Tert-Butyl Ether	1634044	NA	NA	NA	< 0.0045	NA	NA
Methylene Chloride	75092	NA	NA	NA	< 0.009	NA	NA
Naphthalene	91203	NA	NA	NA	< 0.0045	NA	NA
N-Butylbenzene	104518	NA	NA	NA	< 0.0045	NA	NA
N-Propylbenzene	103651	NA	NA	NA	< 0.0045	NA	NA
O-Xylene	95476	NA	NA	NA	< 0.0045	NA	NA
Sec-Butylbenzene	135988	NA	NA	NA	< 0.0045	NA	NA
Styrene	100425	NA	NA	NA	< 0.0045	NA	NA
Tert-Butylbenzene	98066	NA	NA	NA	< 0.0045	NA	NA
Tetrachloroethene	127184	NA	NA	NA	0.104	NA	NA
Toluene	108883	NA	NA	NA	< 0.0045	NA	NA
Total Xylenes	1330207	NA	NA	NA	< 0.009	NA	NA
Trans-1,2-Dichloroethene	156605	NA	NA	NA	< 0.0045	NA	NA
Trans-1,3-Dichloropropene	10061026	NA	NA	NA	< 0.0045	NA	NA
Trichloroethene	79016	NA	NA	NA	< 0.175	NA	NA
Trichlorofluoromethane	75694	NA	NA	NA	< 0.0045	NA	NA
Vinyl Acetate	108054	NA	NA	NA	< 0.022	NA	NA
Vinyl Chloride	75014	NA	NA	NA	< 0.0045	NA	NA
Dibromochloropropane (DBCP)	67708832	NA	NA	NA	< 0.0045	NA	NA
VOCs - Method 3810 Mod							
Benzene	71432	< 0.0084 J	< 0.0084 J	< 0.0084 J	NA	< 0.0084 J	< 0.0084 J
Cis-1,2-Dichloroethene	156592	< 0.0084 J	< 0.0084 J	< 0.0084 J	NA	< 0.0084 J	< 0.0084 J
Ethylbenzene	100414	< 0.0084 J	< 0.0084 J	< 0.0084 J	NA	< 0.0084 J	< 0.0084 J
Tetrachloroethene	127184	< 0.0084 J	0.199 J	0.0392 J	NA	< 0.0084 J	< 0.0084 J
Toluene	108883	< 0.0084 J	< 0.0084 J	< 0.0084 J	NA	< 0.0084 J	< 0.0084 J
Trichloroethene	79016	< 0.0084 J	< 0.0084 J	< 0.0084 J	NA	< 0.0084 J	< 0.0084 J
Total Xylenes	1330207	< 0.0084 J	< 0.0084 J	< 0.0084 J	NA	< 0.0084 J	< 0.0084 J

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-13-15 15 12/19/2013 Investigation Eastern Area A-10 Subsurface	A10-13-5 5 12/19/2013 Investigation Eastern Area A-10 Subsurface	A10-14-2 2 12/19/2013 Investigation Eastern Area A-10 Surface	A10-1-5 5 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-15-10 10 1/6/2014 Investigation Eastern Area A-10 Subsurface	A10-15-5 5 1/6/2014 Investigation Eastern Area A-10 Subsurface	A10-16-2 2 1/6/2014 Investigation Eastern Area A-10 Surface
Semi-Volatile Organics (mg/kg)							
1,2,4-Trichlorobenzene	120821	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95501	NA	NA	NA	NA	NA	NA
1,2-Diphenylhydrazine	122667	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541731	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106467	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene	90120	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	95954	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	88062	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	120832	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	105679	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	51285	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	121142	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	606202	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	91587	NA	NA	NA	NA	NA	NA
2-Chlorophenol	95578	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	91576	NA	NA	NA	NA	NA	NA
2-Methylphenol	95487	NA	NA	NA	NA	NA	NA
2-Nitroaniline	88744	NA	NA	NA	NA	NA	NA
2-Nitrophenol	88755	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	91941	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99092	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-Methylphenol	534521	NA	NA	NA	NA	NA	NA
4-Bromophenyl Phenyl Ether	101553	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	59507	NA	NA	NA	NA	NA	NA
4-Chloroaniline	106478	NA	NA	NA	NA	NA	NA
4-Chlorophenyl Phenyl Ether	7005723	NA	NA	NA	NA	NA	NA
4-Nitroaniline	100016	NA	NA	NA	NA	NA	NA
4-Nitrophenol	100027	NA	NA	NA	NA	NA	NA
Acenaphthene	83329	NA	NA	NA	NA	NA	NA
Acenaphthylene	208968	NA	NA	NA	NA	NA	NA
Aniline	62533	NA	NA	NA	NA	NA	NA
Anthracene	120127	NA	NA	NA	NA	NA	NA
Benzenzidine	92875	NA	NA	NA	NA	NA	NA
Benzo(A)Anthracene	56553	NA	NA	NA	NA	NA	NA
Benzo(A)Pyrene	50328	NA	NA	NA	NA	NA	NA
Benzo(B)Fluoranthene	205992	NA	NA	NA	NA	NA	NA
Benzo(G,H,I)Perylene	191242	NA	NA	NA	NA	NA	NA
Benzo(K)Fluoranthene	207089	NA	NA	NA	NA	NA	NA
Benzoic Acid	65850	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	100516	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethoxy)Methane	111911	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethyl)Ether	111444	NA	NA	NA	NA	NA	NA
Bis(2-Chloroisopropyl)Ether	108601	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-13-15	A10-13-5	A10-14-2	A10-1-5	A10-15-10	A10-15-5	A10-16-2
Sample Depth	15	5	2	5	10	5	2
Date Collected	12/19/2013	12/19/2013	12/19/2013	10/2/2013	1/6/2014	1/6/2014	1/6/2014
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Subsurface	Surface
Constituent	CAS No.						
Semi-Volatile Organics (mg/kg) (continued)							
Bis(2-Ethylhexyl) Phthalate	117817	NA	NA	NA	NA	NA	NA
Butyl Benzyl Phthalate	85687	NA	NA	NA	NA	NA	NA
Carbazole	86748	NA	NA	NA	NA	NA	NA
Chrysene	218019	NA	NA	NA	NA	NA	NA
Dibenz(A,H)Anthracene	53703	NA	NA	NA	NA	NA	NA
Dibenzofuran	132649	NA	NA	NA	NA	NA	NA
Diethyl Phthalate	84662	NA	NA	NA	NA	NA	NA
Dimethyl Phthalate	131113	NA	NA	NA	NA	NA	NA
Di-N-Butyl Phthalate	84742	NA	NA	NA	NA	NA	NA
Di-N-Octyl Phthalate	117840	NA	NA	NA	NA	NA	NA
Fluoranthene	206440	NA	NA	NA	NA	NA	NA
Fluorene	86737	NA	NA	NA	NA	NA	NA
Hexachloro-1,3-Cyclopentadiene	77474	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	118741	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	87683	NA	NA	NA	NA	NA	NA
Hexachloroethane	67721	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-Cd)Pyrene	193395	NA	NA	NA	NA	NA	NA
Isophorone	78591	NA	NA	NA	NA	NA	NA
M-,P-Cresol Mixture	15831104	NA	NA	NA	NA	NA	NA
Naphthalene	91203	NA	NA	NA	NA	NA	NA
Nitrobenzene	98953	NA	NA	NA	NA	NA	NA
N-Nitrosodimethylamine	62759	NA	NA	NA	NA	NA	NA
N-Nitrosodi-N-Propylamine	621647	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	86306	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Phenanthrene	85018	NA	NA	NA	NA	NA	NA
Phenol	108952	NA	NA	NA	NA	NA	NA
Pyrene	129000	NA	NA	NA	NA	NA	NA
Pyridine	110861	NA	NA	NA	NA	NA	NA
PCBs (mg/kg)							
Pcb- 1016	12674112	NA	NA	NA	NA	NA	NA
Pcb- 1221	11104282	NA	NA	NA	NA	NA	NA
Pcb- 1232	11141165	NA	NA	NA	NA	NA	NA
Pcb- 1242	53469219	NA	NA	NA	NA	NA	NA
Pcb- 1248	12672296	NA	NA	NA	NA	NA	NA
Pcb- 1254	11097691	NA	NA	NA	NA	NA	NA
Pcb- 1260	11096825	NA	NA	NA	NA	NA	NA
Total Petroleum Hydrocarbons (TPH) (mg/kg)							
DRO (C10-C28) Range	DRO	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-13-15 15 12/19/2013 Investigation Eastern Area A-10 Subsurface	A10-13-5 5 12/19/2013 Investigation Eastern Area A-10 Subsurface	A10-14-2 2 12/19/2013 Investigation Eastern Area A-10 Surface	A10-1-5 5 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-15-10 10 1/6/2014 Investigation Eastern Area A-10 Subsurface	A10-15-5 5 1/6/2014 Investigation Eastern Area A-10 Subsurface	A10-16-2 2 1/6/2014 Investigation Eastern Area A-10 Surface
Herbicides/Pesticides (mg/kg)							
2,4,5-T	93765	NA	NA	NA	NA	NA	NA
2,4-D	94757	NA	NA	NA	NA	NA	NA
2,4-Db	94826	NA	NA	NA	NA	NA	NA
4,4'-DDD	72548	NA	NA	NA	NA	NA	NA
4,4'-DDE	72559	NA	NA	NA	NA	NA	NA
4,4'-DDT	50293	NA	NA	NA	NA	NA	NA
Aldrin	309002	NA	NA	NA	NA	NA	NA
Alpha-BHC	319846	NA	NA	NA	NA	NA	NA
Beta-BHC	319857	NA	NA	NA	NA	NA	NA
Delta-BHC	319868	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	5103719	NA	NA	NA	NA	NA	NA
Dalapon	75990	NA	NA	NA	NA	NA	NA
Dicamba	1918009	NA	NA	NA	NA	NA	NA
Dichoroprop	120365	NA	NA	NA	NA	NA	NA
Dieldrin	60571	NA	NA	NA	NA	NA	NA
Dinoseb	88857	NA	NA	NA	NA	NA	NA
Endosulfan I	959988	NA	NA	NA	NA	NA	NA
Endosulfan II	33213659	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	1031078	NA	NA	NA	NA	NA	NA
Endrin	72208	NA	NA	NA	NA	NA	NA
Endrin aldehyde	7421934	NA	NA	NA	NA	NA	NA
Endrin ketone	53494705	NA	NA	NA	NA	NA	NA
Gamma-BHC	58899	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	5103742	NA	NA	NA	NA	NA	NA
Heptachlor	76448	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024573	NA	NA	NA	NA	NA	NA
Mcpa	94746	NA	NA	NA	NA	NA	NA
Mcpp	93652	NA	NA	NA	NA	NA	NA
Methoxychlor	72435	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Silvex (2,4,5-TP)	93721	NA	NA	NA	NA	NA	NA
Toxaphene	8001352	NA	NA	NA	NA	NA	NA
Total Metals (mg/kg)							
Aluminum	7429905	NA	NA	NA	NA	NA	NA
Antimony	7440360	NA	NA	NA	NA	NA	NA
Arsenic	7440382	NA	NA	NA	3.7	NA	NA
Barium	7440393	NA	NA	NA	164	NA	NA
Beryllium	7440417	NA	NA	NA	NA	NA	NA
Boron	7440428	NA	NA	NA	NA	NA	NA
Cadmium	7440439	NA	NA	NA	NA	NA	NA
Calcium	7440702	NA	NA	NA	< 0.46	NA	NA
Chromium	7440473	NA	NA	NA	15.9	NA	NA
Cobalt	7440484	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-13-15	A10-13-5	A10-14-2	A10-1-5	A10-15-10	A10-15-5	A10-16-2
Sample Depth	15	5	2	5	10	5	2
Date Collected	12/19/2013	12/19/2013	12/19/2013	10/2/2013	1/6/2014	1/6/2014	1/6/2014
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Subsurface	Surface
Constituent	CAS No.						
Total Metals (mg/kg) (continued)							
Copper	7440508	NA	NA	NA	NA	NA	NA
Iron	7439896	NA	NA	NA	NA	NA	NA
Lead	7439921	NA	NA	NA	15.8	NA	NA
Lithium	7439932	NA	NA	NA	NA	NA	NA
Manganese	7439965	NA	NA	NA	NA	NA	NA
Magnesium	7439954	NA	NA	NA	NA	NA	NA
Mercury	7439976	NA	NA	NA	< 0.051	NA	NA
Molybdenum	7439987	NA	NA	NA	NA	NA	NA
Nickel	7440020	NA	NA	NA	NA	NA	NA
Potassium	7440097	NA	NA	NA	NA	NA	NA
Selenium	7782492	NA	NA	NA	< 2.3	NA	NA
Silver	7440224	NA	NA	NA	< 1.2	NA	NA
Sodium	7440235	NA	NA	NA	NA	NA	NA
Strontium	7440246	NA	NA	NA	NA	NA	NA
Thallium	7440280	NA	NA	NA	NA	NA	NA
Tin	7440315	NA	NA	NA	NA	NA	NA
Titanium	7440326	NA	NA	NA	NA	NA	NA
Vanadium	7440622	NA	NA	NA	NA	NA	NA
Zinc	7440666	NA	NA	NA	NA	NA	NA
Other Parameters							
PH	PH	NA	NA	NA	NA	NA	NA
Total Organic Carbon	1012	NA	NA	NA	NA	NA	NA

Notes:
 NA - Not Analyzed.
 J - Estimated value.
 R- Rejected value.

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-16-5 5 1/6/2014 Investigation Eastern Area A-10 Subsurface	A10-17-10 10 1/6/2014 Investigation Eastern Area A-10 Subsurface	A10-17-15 15 1/6/2014 Investigation Eastern Area A-10 Subsurface	A10-17-2 2 1/6/2014 Investigation Eastern Area A-10 Surface	A10-17-5 5 1/6/2014 Investigation Eastern Area A-10 Subsurface	A10-1-INT 19 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-2-0.5 0.5 10/2/2013 Investigation Eastern Area A-10 Surface
Volatile Organics (mg/kg)							
1,1,1,2-Tetrachloroethane	630206	< 0.0033	NA	NA	NA	NA	< 0.0036
1,1,1-Trichloroethane	71556	< 0.0033	NA	NA	NA	NA	< 0.0603
1,1,2,2-Tetrachloroethane	79345	< 0.0033	NA	NA	NA	NA	< 0.0036
1,1,2-Trichloroethane	79005	< 0.0033	NA	NA	NA	NA	< 0.0036
1,1-Dichloroethane	75343	< 0.0033	NA	NA	NA	NA	< 0.0036
1,1-Dichloroethene	75354	< 0.0033	NA	NA	NA	NA	0.0143
1,1-Dichloropropene	563586	< 0.0033	NA	NA	NA	NA	0.0038
1,2,3-Trichlorobenzene	87616	< 0.0033	NA	NA	NA	NA	< 0.0036
1,2,3-Trichloropropane	96184	< 0.0033	NA	NA	NA	NA	< 0.0036
1,2,4-Trichlorobenzene	120821	< 0.0033	NA	NA	NA	NA	< 0.0036
1,2,4-Trimethylbenzene	95636	< 0.0033	NA	NA	NA	NA	< 0.0036
1,2-Dibromoethane	106934	< 0.0033	NA	NA	NA	NA	< 0.0036
1,2-Dichlorobenzene	95501	< 0.0033	NA	NA	NA	NA	< 0.0036
1,2-Dichloroethane	107062	< 0.0033	NA	NA	NA	NA	< 0.0036
1,2-Dichloroethene, Total	540590	< 0.0033	NA	NA	NA	NA	< 0.0036
1,2-Dichloropropane	78875	< 0.0033	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	108678	< 0.0033	NA	NA	NA	NA	< 0.0036
1,3-Dichlorobenzene	541731	< 0.0033	NA	NA	NA	NA	< 0.0036
1,3-Dichloropropane	142289	< 0.0033	NA	NA	NA	NA	< 0.0036
1,4-Dichlorobenzene	106467	< 0.0033	NA	NA	NA	NA	< 0.0036
1,4-Dioxane	123911	NA	NA	NA	NA	NA	< 0.0036
2,2-Dichloropropane	594207	< 0.0033	NA	NA	NA	NA	< 0.14
2-Butanone	78933	< 0.0065	NA	NA	NA	NA	< 0.0036
2-Chloroethyl Vinyl Ether	110758	NA	NA	NA	NA	NA	< 0.018
2-Chlorotoluene	95498	< 0.0033	NA	NA	NA	NA	< 0.018
2-Hexanone (methyl butyl ketone)	591786	< 0.013	NA	NA	NA	NA	< 0.0036
3-Chloro-1,2-Dibromopropane	96128	< 0.0065	NA	NA	NA	NA	< 0.018
4-Chlorotoluene	106434	< 0.0033	NA	NA	NA	NA	NA
4-Isopropyltoluene	99876	< 0.0033	NA	NA	NA	NA	< 0.0036
4-Methyl-2-Pentanone	108101	< 0.0065	NA	NA	NA	NA	< 0.0036
Acetone	67641	< 0.013	NA	NA	NA	NA	< 0.018
Acrolein	107028	NA	NA	NA	NA	NA	< 0.036
Acrylonitrile	107131	NA	NA	NA	NA	NA	< 0.018
Benzene	71432	< 0.0033	NA	NA	NA	NA	< 0.018
Bromobenzene	108861	< 0.0033	NA	NA	NA	NA	< 0.0036
Bromochloromethane	74975	< 0.0033	NA	NA	NA	NA	< 0.0036
Bromodichloromethane	75274	< 0.0033	NA	NA	NA	NA	< 0.0036
Bromoform	75252	< 0.0033	NA	NA	NA	NA	< 0.0036
Bromomethane	74839	< 0.0033	NA	NA	NA	NA	< 0.0036
Carbon Disulfide	75150	< 0.0033	NA	NA	NA	NA	< 0.0036
Carbon Tetrachloride	56235	< 0.0033	NA	NA	NA	NA	< 0.0036
Chlorobenzene	108907	< 0.0033	NA	NA	NA	NA	< 0.0036
Dibromochloromethane	124481	< 0.0033	NA	NA	NA	NA	< 0.0036

Risk-Based Remedies
RBR Consulting, Inc.

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-16-5	A10-17-10	A10-17-15	A10-17-2	A10-17-5	A10-1-INT	A10-2-0.5
Sample Depth	5	10	15	2	5	19	0.5
Date Collected	1/6/2014	1/6/2014	1/6/2014	1/6/2014	1/6/2014	10/2/2013	10/2/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Surface
Constituent	CAS No.						
Volatile Organics (mg/kg) (continued)							
Chloroethane	75003	< 0.0033	NA	NA	NA	NA	< 0.0036
Chloroform	67663	< 0.0033	NA	NA	NA	NA	< 0.0036
Chloromethane	74873	< 0.0033	NA	NA	NA	NA	< 0.0036
Cis-1,2-Dichloroethene	156592	< 0.0033	NA	NA	NA	NA	0.0153
Cis-1,3-Dichloropropene	10061015	< 0.0033	NA	NA	NA	NA	< 0.0036
Dibromomethane	74953	< 0.0033	NA	NA	NA	NA	< 0.0036
Dichlorodifluoromethane	75718	< 0.0033	NA	NA	NA	NA	< 0.0036
Ethylbenzene	100414	< 0.0033	NA	NA	NA	NA	< 0.0036
Hexachlorobutadiene	87683	< 0.0033	NA	NA	NA	NA	< 0.0036
Isopropylbenzene	98828	< 0.0033	NA	NA	NA	NA	< 0.0036
M,P-Xylenes	179601231	NA	NA	NA	NA	NA	< 0.0071
Methyl Tert-Butyl Ether	1634044	< 0.0033	NA	NA	NA	NA	< 0.0036
Methylene Chloride	75092	< 0.0033	NA	NA	NA	NA	< 0.0036
Naphthalene	91203	< 0.0065	NA	NA	NA	NA	< 0.0036
N-Butylbenzene	104518	< 0.0033	NA	NA	NA	NA	< 0.0036
N-Propylbenzene	103651	< 0.0033	NA	NA	NA	NA	< 0.0036
O-Xylene	95476	NA	NA	NA	NA	NA	< 0.0036
Sec-Butylbenzene	135988	< 0.0033	NA	NA	NA	NA	< 0.0036
Styrene	100425	< 0.0033	NA	NA	NA	NA	< 0.0036
Tert-Butylbenzene	98066	< 0.0033	NA	NA	NA	NA	0.0529
Tetrachloroethene	127184	0.0146	NA	NA	NA	NA	< 0.0036
Toluene	108883	< 0.0033	NA	NA	NA	NA	< 0.0071
Total Xylenes	1330207	< 0.0033	NA	NA	NA	NA	< 0.0036
Trans-1,2-Dichloroethene	156605	< 0.0033	NA	NA	NA	NA	< 0.0036
Trans-1,3-Dichloropropene	10061026	< 0.0033	NA	NA	NA	NA	0.0077
Trichloroethene	79016	< 0.0033	NA	NA	NA	NA	< 0.0036
Trichlorofluoromethane	75694	< 0.0033	NA	NA	NA	NA	< 0.018
Vinyl Acetate	108054	NA	NA	NA	NA	NA	< 0.0036
Vinyl Chloride	75014	< 0.0033	NA	NA	NA	NA	< 0.0036
Dibromochloropropane (DBCP)	67708832	NA	NA	NA	NA	NA	< 0.0036
VOCs - Method 3810 Mod							
Benzene	71432	< 0.0084 J	NA				
Cis-1,2-Dichloroethene	156592	< 0.0084 J	< 0.0084 J	< 0.0084 J	< 0.0084 J	0.0801 J	NA
Ethylbenzene	100414	< 0.0084 J	NA				
Tetrachloroethene	127184	< 0.021 J	< 0.0084 J	< 0.0084 J	< 0.0084 J	< 0.0084 J	NA
Toluene	108883	< 0.0084 J	NA				
Trichloroethene	79016	< 0.0084 J	NA				
Total Xylenes	1330207	< 0.0084 J	NA				

R

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-16-5 5 1/6/2014 Investigation Eastern Area A-10 Subsurface	A10-17-10 10 1/6/2014 Investigation Eastern Area A-10 Subsurface	A10-17-15 15 1/6/2014 Investigation Eastern Area A-10 Subsurface	A10-17-2 2 1/6/2014 Investigation Eastern Area A-10 Surface	A10-17-5 5 1/6/2014 Investigation Eastern Area A-10 Subsurface	A10-1-INT 19 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-2-0.5 0.5 10/2/2013 Investigation Eastern Area A-10 Surface
Semi-Volatile Organics (mg/kg)							
1,2,4-Trichlorobenzene	120821	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95501	NA	NA	NA	NA	NA	NA
1,2-Diphenylhydrazine	122667	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541731	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106467	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene	90120	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	95954	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	88062	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	120832	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	105679	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	51285	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	121142	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	606202	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	91587	NA	NA	NA	NA	NA	NA
2-Chlorophenol	95578	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	91576	NA	NA	NA	NA	NA	NA
2-Methylphenol	95487	NA	NA	NA	NA	NA	NA
2-Nitroaniline	88744	NA	NA	NA	NA	NA	NA
2-Nitrophenol	88755	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	91941	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99092	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-Methylphenol	534521	NA	NA	NA	NA	NA	NA
4-Bromophenyl Phenyl Ether	101553	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	59507	NA	NA	NA	NA	NA	NA
4-Chloroaniline	106478	NA	NA	NA	NA	NA	NA
4-Chlorophenyl Phenyl Ether	7005723	NA	NA	NA	NA	NA	NA
4-Nitroaniline	100016	NA	NA	NA	NA	NA	NA
4-Nitrophenol	100027	NA	NA	NA	NA	NA	NA
Acenaphthene	83329	NA	NA	NA	NA	NA	NA
Acenaphthylene	208968	NA	NA	NA	NA	NA	NA
Aniline	62533	NA	NA	NA	NA	NA	NA
Anthracene	120127	NA	NA	NA	NA	NA	NA
Benzidine	92875	NA	NA	NA	NA	NA	NA
Benzo(A)Anthracene	56553	NA	NA	NA	NA	NA	NA
Benzo(A)Pyrene	50328	NA	NA	NA	NA	NA	NA
Benzo(B)Fluoranthene	205992	NA	NA	NA	NA	NA	NA
Benzo(G,H,I)Perylene	191242	NA	NA	NA	NA	NA	NA
Benzo(K)Fluoranthene	207089	NA	NA	NA	NA	NA	NA
Benzoic Acid	65850	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	100516	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethoxy)Methane	111911	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethyl)Ether	111444	NA	NA	NA	NA	NA	NA
Bis(2-Chloroisopropyl)Ether	108601	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-16-5	A10-17-10	A10-17-15	A10-17-2	A10-17-5	A10-1-INT	A10-2-0.5
Sample Depth	5	10	15	2	5	19	0.5
Date Collected	1/6/2014	1/6/2014	1/6/2014	1/6/2014	1/6/2014	10/2/2013	10/2/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Surface
Constituent	CAS No.						
Semi-Volatile Organics (mg/kg) (continued)							
Bis(2-Ethylhexyl) Phthalate	117817	NA	NA	NA	NA	NA	NA
Butyl Benzyl Phthalate	85687	NA	NA	NA	NA	NA	NA
Carbazole	86748	NA	NA	NA	NA	NA	NA
Chrysene	218019	NA	NA	NA	NA	NA	NA
Dibenz(A,H)Anthracene	53703	NA	NA	NA	NA	NA	NA
Dibenzofuran	132649	NA	NA	NA	NA	NA	NA
Diethyl Phthalate	84662	NA	NA	NA	NA	NA	NA
Dimethyl Phthalate	131113	NA	NA	NA	NA	NA	NA
Di-N-Butyl Phthalate	84742	NA	NA	NA	NA	NA	NA
Di-N-Octyl Phthalate	117840	NA	NA	NA	NA	NA	NA
Fluoranthene	206440	NA	NA	NA	NA	NA	NA
Fluorene	86737	NA	NA	NA	NA	NA	NA
Hexachloro-1,3-Cyclopentadiene	77474	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	118741	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	87683	NA	NA	NA	NA	NA	NA
Hexachloroethane	67721	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-Cd)Pyrene	193395	NA	NA	NA	NA	NA	NA
Isophorone	78591	NA	NA	NA	NA	NA	NA
M-,P-Cresol Mixture	15831104	NA	NA	NA	NA	NA	NA
Naphthalene	91203	NA	NA	NA	NA	NA	NA
Nitrobenzene	98953	NA	NA	NA	NA	NA	NA
N-Nitrosodimethylamine	62759	NA	NA	NA	NA	NA	NA
N-Nitrosodi-N-Propylamine	621647	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	86306	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Phenanthrene	85018	NA	NA	NA	NA	NA	NA
Phenol	108952	NA	NA	NA	NA	NA	NA
Pyrene	129000	NA	NA	NA	NA	NA	NA
Pyridine	110861	NA	NA	NA	NA	NA	NA
PCBs (mg/kg)							
Pcb- 1016	12674112	NA	NA	NA	NA	NA	NA
Pcb- 1221	11104282	NA	NA	NA	NA	NA	NA
Pcb- 1232	11141165	NA	NA	NA	NA	NA	NA
Pcb- 1242	53469219	NA	NA	NA	NA	NA	NA
Pcb- 1248	12672296	NA	NA	NA	NA	NA	NA
Pcb- 1254	11097691	NA	NA	NA	NA	NA	NA
Pcb- 1260	11096825	NA	NA	NA	NA	NA	NA
Total Petroleum Hydrocarbons (TPH) (mg/kg)							
DRO (C10-C28) Range	DRO	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-16-5 5 1/6/2014 Investigation Eastern Area A-10 Subsurface	A10-17-10 10 1/6/2014 Investigation Eastern Area A-10 Subsurface	A10-17-15 15 1/6/2014 Investigation Eastern Area A-10 Subsurface	A10-17-2 2 1/6/2014 Investigation Eastern Area A-10 Surface	A10-17-5 5 1/6/2014 Investigation Eastern Area A-10 Subsurface	A10-1-INT 19 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-2-0.5 0.5 10/2/2013 Investigation Eastern Area A-10 Surface
Constituent							
Herbicides/Pesticides (mg/kg)							
2,4,5-T 93765	NA	NA	NA	NA	NA	NA	NA
2,4-D 94757	NA	NA	NA	NA	NA	NA	NA
2,4-Db 94826	NA	NA	NA	NA	NA	NA	NA
4,4'-DDD 72548	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE 72559	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT 50293	NA	NA	NA	NA	NA	NA	NA
Aldrin 309002	NA	NA	NA	NA	NA	NA	NA
Alpha-BHC 319846	NA	NA	NA	NA	NA	NA	NA
Beta-BHC 319857	NA	NA	NA	NA	NA	NA	NA
Delta-BHC 319868	NA	NA	NA	NA	NA	NA	NA
Alpha-Chlordane 5103719	NA	NA	NA	NA	NA	NA	NA
Dalapon 75990	NA	NA	NA	NA	NA	NA	NA
Dicamba 1918009	NA	NA	NA	NA	NA	NA	NA
Dichoroprop 120365	NA	NA	NA	NA	NA	NA	NA
Dieldrin 60571	NA	NA	NA	NA	NA	NA	NA
Dinoseb 88857	NA	NA	NA	NA	NA	NA	NA
Endosulfan I 959988	NA	NA	NA	NA	NA	NA	NA
Endosulfan II 33213659	NA	NA	NA	NA	NA	NA	NA
Endosulfan sulfate 1031078	NA	NA	NA	NA	NA	NA	NA
Endrin 72208	NA	NA	NA	NA	NA	NA	NA
Endrin aldehyde 7421934	NA	NA	NA	NA	NA	NA	NA
Endrin ketone 53494705	NA	NA	NA	NA	NA	NA	NA
Gamma-BHC 58899	NA	NA	NA	NA	NA	NA	NA
Gamma-Chlordane 5103742	NA	NA	NA	NA	NA	NA	NA
Heptachlor 76448	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide 1024573	NA	NA	NA	NA	NA	NA	NA
Mcpa 94746	NA	NA	NA	NA	NA	NA	NA
Mcpp 93652	NA	NA	NA	NA	NA	NA	NA
Methoxychlor 72435	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol 87865	NA	NA	NA	NA	NA	NA	NA
Silvex (2,4,5-TP) 93721	NA	NA	NA	NA	NA	NA	NA
Toxaphene 8001352	NA	NA	NA	NA	NA	NA	NA
Total Metals (mg/kg)							
Aluminum 7429905	NA	NA	NA	NA	NA	NA	NA
Antimony 7440360	NA	NA	NA	NA	NA	NA	NA
Arsenic 7440382	NA	NA	NA	NA	NA	1	4.8
Barium 7440393	NA	NA	NA	NA	NA	25.6	256
Beryllium 7440417	NA	NA	NA	NA	NA	NA	NA
Boron 7440428	NA	NA	NA	NA	NA	NA	NA
Cadmium 7440439	NA	NA	NA	NA	NA	< 0.17	9.7
Calcium 7440702	NA	NA	NA	NA	NA	NA	NA
Chromium 7440473	NA	NA	NA	NA	NA	2.4	197
Cobalt 7440484	NA	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-16-5	A10-17-10	A10-17-15	A10-17-2	A10-17-5	A10-1-INT	A10-2-0.5
Sample Depth	5	10	15	2	5	19	0.5
Date Collected	1/6/2014	1/6/2014	1/6/2014	1/6/2014	1/6/2014	10/2/2013	10/2/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Surface
Constituent	CAS No.						
Total Metals (mg/kg) (continued)							
Copper	7440508	NA	NA	NA	NA	NA	NA
Iron	7439896	NA	NA	NA	NA	NA	NA
Lead	7439921	NA	NA	NA	NA	2.8	636
Lithium	7439932	NA	NA	NA	NA	NA	NA
Manganese	7439965	NA	NA	NA	NA	NA	NA
Magnesium	7439954	NA	NA	NA	NA	NA	NA
Mercury	7439976	NA	NA	NA	NA	< 0.044	0.38
Molybdenum	7439987	NA	NA	NA	NA	NA	NA
Nickel	7440020	NA	NA	NA	NA	NA	NA
Potassium	7440097	NA	NA	NA	NA	NA	NA
Selenium	7782492	NA	NA	NA	NA	< 0.86	< 3.6
Silver	7440224	NA	NA	NA	NA	< 0.43	< 1.8
Sodium	7440235	NA	NA	NA	NA	NA	NA
Strontium	7440246	NA	NA	NA	NA	NA	NA
Thallium	7440280	NA	NA	NA	NA	NA	NA
Tin	7440315	NA	NA	NA	NA	NA	NA
Titanium	7440326	NA	NA	NA	NA	NA	NA
Vanadium	7440622	NA	NA	NA	NA	NA	NA
Zinc	7440666	NA	NA	NA	NA	NA	NA
Other Parameters							
PH	PH	NA	NA	NA	NA	NA	NA
Total Organic Carbon	1012	NA	NA	NA	NA	NA	NA

Notes:
 NA - Not Analyzed.
 J - Estimated value.
 R- Rejected value.

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-2-10 10 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-2-15 15 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-2-17 17 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-2-2 2 10/2/2013 Investigation Eastern Area A-10 Surface	A10-2-5 5 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-2-INT 18 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-3-10 10 10/3/2013 Investigation Eastern Area A-10 Subsurface
Constituent							
Volatile Organics (mg/kg)							
1,1,1,2-Tetrachloroethane	630206 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
1,1,1-Trichloroethane	71556 0.0073	0.0096	0.261 E	0.157 E	0.0104	0.592	0.0043 J
1,1,2,2-Tetrachloroethane	79345 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
1,1,2-Trichloroethane	79005 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
1,1-Dichloroethane	75343 < 0.0042 J	0.0057	0.129	0.0675	0.009	0.221 E	< 0.0045
1,1-Dichloroethane	75354 < 0.0052	< 0.0051	0.0123	0.0093	< 0.006	0.0401	< 0.0045
1,1-Dichloropropene	563586 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
1,2,3-Trichlorobenzene	87616 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
1,2,3-Trichloropropane	96184 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
1,2,4-Trichlorobenzene	120821 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
1,2,4-Trimethylbenzene	95636 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
1,2-Dibromoethane	106934 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
1,2-Dichlorobenzene	95501 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
1,2-Dichloroethane	107062 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	0.0018 J	< 0.0045
1,2-Dichloroethene, Total	540590 NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	78875 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
1,3,5-Trimethylbenzene	108678 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
1,3-Dichlorobenzene	541731 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
1,3-Dichloropropane	142289 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
1,4-Dichlorobenzene	106467 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
1,4-Dioxane	123911 < 0.21	< 0.2	< 0.19	< 0.074	< 0.24	< 0.16	< 0.18
2,2-Dichloropropane	594207 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
2-Butanone	78933 < 0.026	< 0.025	0.0165 J	< 0.0092	< 0.03	< 0.02	< 0.022
2-Chloroethyl Vinyl Ether	110758 < 0.026	< 0.025	< 0.023	< 0.0092	< 0.03	< 0.02	< 0.022
2-Chlorotoluene	95498 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
2-Hexanone (methyl butyl ketone)	591786 < 0.026	< 0.025	< 0.023	< 0.0092	< 0.03	< 0.02	< 0.022
3-Chloro-1,2-Dibromopropane	96128 NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	106434 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
4-Isopropyltoluene	99876 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
4-Methyl-2-Pentanone	108101 < 0.026	< 0.025	< 0.023	< 0.0092	< 0.03	< 0.02	< 0.022
Acetone	67641 < 0.052	< 0.051	0.0706	< 0.018	< 0.06	< 0.039	< 0.045
Acrolein	107028 < 0.026	< 0.025	< 0.023	< 0.0092	< 0.03	< 0.02	< 0.022
Acrylonitrile	107131 < 0.026	< 0.025	< 0.023	< 0.0092	< 0.03	< 0.02	< 0.022
Benzene	71432 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Bromobenzene	108861 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Bromochloromethane	74975 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Bromodichloromethane	75274 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Bromoform	75252 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Bromomethane	74839 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Carbon Disulfide	75150 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Carbon Tetrachloride	56235 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Chlorobenzene	108907 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Dibromochloromethane	124481 < 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-2-10	A10-2-15	A10-2-17	A10-2-2	A10-2-5	A10-2-INT	A10-3-10	
Sample Depth	10	15	17	2	5	18	10	
Date Collected	10/2/2013	10/2/2013	10/2/2013	10/2/2013	10/2/2013	10/2/2013	10/3/2013	
Sample Type	Investigation							
RA Area	Eastern							
Area/SWMU	Area A-10							
Surface/subsurface	Subsurface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Subsurface	
Constituent	CAS No.							
Volatile Organics (mg/kg) (continued)								
Chloroethane	75003	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Chloroform	67663	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Chloromethane	74873	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Cis-1,2-Dichloroethene	156592	0.0063	0.0096	0.137	0.0749	E 0.0125	0.378	< 0.0045
Cis-1,3-Dichloropropene	10061015	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Dibromomethane	74953	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Dichlorodifluoromethane	75718	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Ethylbenzene	100414	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Hexachlorobutadiene	87683	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Isopropylbenzene	98828	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
M,P-Xylenes	179601231	< 0.01	< 0.01	< 0.0093	< 0.0037	< 0.012	< 0.0078	< 0.009
Methyl Tert-Butyl Ether	1634044	< 0.0052	< 0.0051	R < 0.0047	< 0.0018	R < 0.006	R < 0.0039	< 0.0045
Methylene Chloride	75092	< 0.01	< 0.01	< 0.0093	< 0.0037	< 0.012	< 0.0078	< 0.009
Naphthalene	91203	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
N-Butylbenzene	104518	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
N-Propylbenzene	103651	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
O-Xylene	95476	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Sec-Butylbenzene	135988	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Styrene	100425	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Tert-Butylbenzene	98066	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Tetrachloroethene	127184	0.0049	J 0.0498	0.125	0.0985	E 0.0114	0.289	0.0972
Toluene	108883	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Total Xylenes	1330207	< 0.01	< 0.01	< 0.0093	< 0.0037	< 0.012	< 0.0078	< 0.009
Trans-1,2-Dichloroethene	156605	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	0.0012	J < 0.0045
Trans-1,3-Dichloropropene	10061026	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Trichloroethene	79016	< 0.0052	< 0.0056	0.0146	0.0103	0.0013	J 0.0569	< 0.0045
Trichlorofluoromethane	75694	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
Vinyl Acetate	108054	< 0.026	< 0.025	< 0.023	< 0.0092	< 0.03	< 0.02	< 0.022
Vinyl Chloride	75014	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	0.0034	J < 0.0045
Dibromochloropropane (DBCP)	67708832	< 0.0052	< 0.0051	< 0.0047	< 0.0018	< 0.006	< 0.0039	< 0.0045
VOCs - Method 3810 Mod								
Benzene	71432	NA	NA	NA	NA	NA	NA	NA
Cis-1,2-Dichloroethene	156592	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100414	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	127184	NA	NA	NA	NA	NA	NA	NA
Toluene	108883	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	79016	NA	NA	NA	NA	NA	NA	NA
Total Xylenes	1330207	NA	NA	NA	NA	NA	NA	NA

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Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-2-10 10 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-2-15 15 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-2-17 17 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-2-2 2 10/2/2013 Investigation Eastern Area A-10 Surface	A10-2-5 5 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-2-INT 18 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-3-10 10 10/3/2013 Investigation Eastern Area A-10 Subsurface
Semi-Volatile Organics (mg/kg)							
1,2,4-Trichlorobenzene	120821	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95501	NA	NA	NA	NA	NA	NA
1,2-Diphenylhydrazine	122667	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541731	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106467	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene	90120	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	95954	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	88062	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	120832	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	105679	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	51285	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	121142	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	606202	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	91587	NA	NA	NA	NA	NA	NA
2-Chlorophenol	95578	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	91576	NA	NA	NA	NA	NA	NA
2-Methylphenol	95487	NA	NA	NA	NA	NA	NA
2-Nitroaniline	88744	NA	NA	NA	NA	NA	NA
2-Nitrophenol	88755	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	91941	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99092	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-Methylphenol	534521	NA	NA	NA	NA	NA	NA
4-Bromophenyl Phenyl Ether	101553	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	59507	NA	NA	NA	NA	NA	NA
4-Chloroaniline	106478	NA	NA	NA	NA	NA	NA
4-Chlorophenyl Phenyl Ether	7005723	NA	NA	NA	NA	NA	NA
4-Nitroaniline	100016	NA	NA	NA	NA	NA	NA
4-Nitrophenol	100027	NA	NA	NA	NA	NA	NA
Acenaphthene	83329	NA	NA	NA	NA	NA	NA
Acenaphthylene	208968	NA	NA	NA	NA	NA	NA
Aniline	62533	NA	NA	NA	NA	NA	NA
Anthracene	120127	NA	NA	NA	NA	NA	NA
Benidine	92875	NA	NA	NA	NA	NA	NA
Benzo(A)Anthracene	56553	NA	NA	NA	NA	NA	NA
Benzo(A)Pyrene	50328	NA	NA	NA	NA	NA	NA
Benzo(B)Fluoranthene	205992	NA	NA	NA	NA	NA	NA
Benzo(G,H,I)Perylene	191242	NA	NA	NA	NA	NA	NA
Benzo(K)Fluoranthene	207089	NA	NA	NA	NA	NA	NA
Benzoic Acid	65850	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	100516	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethoxy)Methane	111911	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethyl)Ether	111444	NA	NA	NA	NA	NA	NA
Bis(2-Chloroisopropyl)Ether	108601	NA	NA	NA	NA	NA	NA

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Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-2-10	A10-2-15	A10-2-17	A10-2-2	A10-2-5	A10-2-INT	A10-3-10
Sample Depth	10	15	17	2	5	18	10
Date Collected	10/2/2013	10/2/2013	10/2/2013	10/2/2013	10/2/2013	10/2/2013	10/3/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Subsurface
Constituent	CAS No.						
Semi-Volatile Organics (mg/kg) (continued)							
Bis(2-Ethylhexyl) Phthalate	117817	NA	NA	NA	NA	NA	NA
Butyl Benzyl Phthalate	85687	NA	NA	NA	NA	NA	NA
Carbazole	86748	NA	NA	NA	NA	NA	NA
Chrysene	218019	NA	NA	NA	NA	NA	NA
Dibenz(A,H)Anthracene	53703	NA	NA	NA	NA	NA	NA
Dibenzofuran	132649	NA	NA	NA	NA	NA	NA
Diethyl Phthalate	84662	NA	NA	NA	NA	NA	NA
Dimethyl Phthalate	131113	NA	NA	NA	NA	NA	NA
Di-N-Butyl Phthalate	84742	NA	NA	NA	NA	NA	NA
Di-N-Octyl Phthalate	117840	NA	NA	NA	NA	NA	NA
Fluoranthene	206440	NA	NA	NA	NA	NA	NA
Fluorene	86737	NA	NA	NA	NA	NA	NA
Hexachloro-1,3-Cyclopentadiene	77474	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	118741	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	87683	NA	NA	NA	NA	NA	NA
Hexachloroethane	67721	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-Cd)Pyrene	193395	NA	NA	NA	NA	NA	NA
Isophorone	78591	NA	NA	NA	NA	NA	NA
M-,P-Cresol Mixture	15831104	NA	NA	NA	NA	NA	NA
Naphthalene	91203	NA	NA	NA	NA	NA	NA
Nitrobenzene	98953	NA	NA	NA	NA	NA	NA
N-Nitrosodimethylamine	62759	NA	NA	NA	NA	NA	NA
N-Nitrosodi-N-Propylamine	621647	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	86306	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Phenanthrene	85018	NA	NA	NA	NA	NA	NA
Phenol	108952	NA	NA	NA	NA	NA	NA
Pyrene	129000	NA	NA	NA	NA	NA	NA
Pyridine	110861	NA	NA	NA	NA	NA	NA
PCBs (mg/kg)							
Pcb- 1016	12674112	NA	NA	NA	NA	NA	NA
Pcb- 1221	11104282	NA	NA	NA	NA	NA	NA
Pcb- 1232	11141165	NA	NA	NA	NA	NA	NA
Pcb- 1242	53469219	NA	NA	NA	NA	NA	NA
Pcb- 1248	12672296	NA	NA	NA	NA	NA	NA
Pcb- 1254	11097691	NA	NA	NA	NA	NA	NA
Pcb- 1260	11096825	NA	NA	NA	NA	NA	NA
Total Petroleum Hydrocarbons (TPH) (mg/kg)							
DRO (C10-C28) Range	DRO	NA	NA	NA	NA	NA	NA

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Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-2-10 10 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-2-15 15 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-2-17 17 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-2-2 2 10/2/2013 Investigation Eastern Area A-10 Surface	A10-2-5 5 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-2-INT 18 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-3-10 10 10/3/2013 Investigation Eastern Area A-10 Subsurface
Herbicides/Pesticides (mg/kg)							
2,4,5-T	93765	NA	NA	NA	NA	NA	NA
2,4-D	94757	NA	NA	NA	NA	NA	NA
2,4-Db	94826	NA	NA	NA	NA	NA	NA
4,4'-DDD	72548	NA	NA	NA	NA	NA	NA
4,4'-DDE	72559	NA	NA	NA	NA	NA	NA
4,4'-DDT	50293	NA	NA	NA	NA	NA	NA
Aldrin	309002	NA	NA	NA	NA	NA	NA
Alpha-BHC	319846	NA	NA	NA	NA	NA	NA
Beta-BHC	319857	NA	NA	NA	NA	NA	NA
Delta-BHC	319868	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	5103719	NA	NA	NA	NA	NA	NA
Dalapon	75990	NA	NA	NA	NA	NA	NA
Dicamba	1918009	NA	NA	NA	NA	NA	NA
Dichloroprop	120365	NA	NA	NA	NA	NA	NA
Dieldrin	60571	NA	NA	NA	NA	NA	NA
Dinoseb	88857	NA	NA	NA	NA	NA	NA
Endosulfan I	959988	NA	NA	NA	NA	NA	NA
Endosulfan II	33213659	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	1031078	NA	NA	NA	NA	NA	NA
Endrin	72208	NA	NA	NA	NA	NA	NA
Endrin aldehyde	7421934	NA	NA	NA	NA	NA	NA
Endrin ketone	53494705	NA	NA	NA	NA	NA	NA
Gamma-BHC	58899	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	5103742	NA	NA	NA	NA	NA	NA
Heptachlor	76448	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024573	NA	NA	NA	NA	NA	NA
Mcpa	94746	NA	NA	NA	NA	NA	NA
Mcpp	93652	NA	NA	NA	NA	NA	NA
Methoxychlor	72435	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Silvex (2,4,5-TP)	93721	NA	NA	NA	NA	NA	NA
Toxaphene	8001352	NA	NA	NA	NA	NA	NA
Total Metals (mg/kg)							
Aluminum	7429905	NA	NA	NA	NA	NA	NA
Antimony	7440360	NA	NA	NA	NA	NA	NA
Arsenic	7440382	3.2	3	NA	<	7.6	5.3
Barium	7440393	45.599998	85.1	NA	191	151	30.5
Beryllium	7440417	NA	NA	NA	NA	NA	213
Boron	7440428	NA	NA	NA	NA	NA	NA
Cadmium	7440439	<	<	0.23	3.4	<	0.46
Calcium	7440702	NA	NA	NA	NA	<	0.15
Chromium	7440473	12.6	9.8	NA	68	22.6	<
Cobalt	7440484	NA	NA	NA	NA	2.2	12.7

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Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-2-10	A10-2-15	A10-2-17	A10-2-2	A10-2-5	A10-2-INT	A10-3-10
Sample Depth	10	15	17	2	5	18	10
Date Collected	10/2/2013	10/2/2013	10/2/2013	10/2/2013	10/2/2013	10/2/2013	10/3/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Subsurface
Constituent	CAS No.						
Total Metals (mg/kg) (continued)							
Copper	7440508	NA	NA	NA	NA	NA	NA
Iron	7439896	NA	NA	NA	NA	NA	NA
Lead	7439921	12.4	12.5	NA	88.900002	14.5	22.1
Lithium	7439932	NA	NA	NA	NA	NA	NA
Manganese	7439965	NA	NA	NA	NA	NA	NA
Magnesium	7439954	NA	NA	NA	NA	NA	NA
Mercury	7439976	< 0.05	< 0.048	NA	0.15	< 0.055	< 0.045
Molybdenum	7439987	NA	NA	NA	NA	NA	NA
Nickel	7440020	NA	NA	NA	NA	NA	NA
Potassium	7440097	NA	NA	NA	NA	NA	NA
Selenium	7782492	< 1.1	< 1.3	NA	< 15	< 2.3	< 0.74
Silver	7440224	< 0.56	< 0.64	NA	< 7.6	< 1.1	< 0.37
Sodium	7440235	NA	NA	NA	NA	NA	NA
Strontium	7440246	NA	NA	NA	NA	NA	NA
Thallium	7440280	NA	NA	NA	NA	NA	NA
Tin	7440315	NA	NA	NA	NA	NA	NA
Titanium	7440326	NA	NA	NA	NA	NA	NA
Vanadium	7440622	NA	NA	NA	NA	NA	NA
Zinc	7440666	NA	NA	NA	NA	NA	NA
Other Parameters							
PH	PH	NA	NA	NA	NA	NA	NA
Total Organic Carbon	1012	NA	NA	NA	NA	NA	NA

Notes:
 NA - Not Analyzed.
 J - Estimated value.
 R- Rejected value.

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Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Constituent	Sample Identification Sample Depth Date Collected Sample Type Area/SWMU Surface/subsurface CAS No.	A10-3-15 15 10/3/2013 Investigation Eastern Area A-10 Subsurface	A10-3-2 2 10/3/2013 Investigation Eastern Area A-10 Surface	A10-3-5 5 10/3/2013 Investigation Eastern Area A-10 Subsurface	A10-3-INT 17 10/3/2013 Investigation Eastern Area A-10 Subsurface	A10-4-0.5 0.5 10/1/2013 Investigation Eastern Area A-10 Surface	A10-4-10 10 10/1/2013 Investigation Eastern Area A-10 Subsurface	A10-4-15 15 10/1/2013 Investigation Eastern Area A-10 Subsurface
Volatile Organics (mg/kg)								
1,1,1,2-Tetrachloroethane	630206	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
1,1,1-Trichloroethane	71556	NA	< 0.002 J	< 0.0033 J	NA	NA	< 0.0067	NA
1,1,2,2-Tetrachloroethane	79345	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
1,1,2-Trichloroethane	79005	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
1,1-Dichloroethane	75343	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
1,1-Dichloroethene	75354	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
1,1-Dichloropropene	563586	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
1,2,3-Trichlorobenzene	87616	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
1,2,3-Trichloropropane	96184	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
1,2,4-Trichlorobenzene	120821	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
1,2,4-Trimethylbenzene	95636	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
1,2-Dibromoethane	106934	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
1,2-Dichlorobenzene	95501	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
1,2-Dichloroethane	107062	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
1,2-Dichloroethene, Total	540590	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	78875	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
1,3,5-Trimethylbenzene	108678	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
1,3-Dichlorobenzene	541731	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
1,3-Dichloropropane	142289	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
1,4-Dichlorobenzene	106467	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
1,4-Dioxane	123911	NA	< 0.24	< 0.23	NA	NA	< 0.27	NA
2,2-Dichloropropane	594207	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
2-Butanone	78933	NA	< 0.03	< 0.028	NA	NA	< 0.033	NA
2-Chloroethyl Vinyl Ether	110758	NA	< 0.03	< 0.028	NA	NA	< 0.033	NA
2-Chlorotoluene	95498	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
2-Hexanone (methyl butyl ketone)	591786	NA	< 0.03	< 0.028	NA	NA	< 0.033	NA
3-Chloro-1,2-Dibromopropane	96128	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	106434	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
4-Isopropyltoluene	99876	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
4-Methyl-2-Pentanone	108101	NA	< 0.03	< 0.028	NA	NA	< 0.033	NA
Acetone	67641	NA	< 0.06	< 0.057	NA	NA	< 0.067	NA
Acrolein	107028	NA	< 0.03	< 0.028	NA	NA	< 0.033	NA
Acrylonitrile	107131	NA	< 0.03	< 0.028	NA	NA	< 0.033	NA
Benzene	71432	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
Bromobenzene	108861	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
Bromochloromethane	74975	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
Bromodichloromethane	75274	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
Bromoform	75252	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
Bromomethane	74839	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
Carbon Disulfide	75150	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
Carbon Tetrachloride	56235	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
Chlorobenzene	108907	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA
Dibromochloromethane	124481	NA	< 0.006	< 0.0057	NA	NA	< 0.0067	NA

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Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-3-15	A10-3-2	A10-3-5	A10-3-INT	A10-4-0.5	A10-4-10	A10-4-15
Sample Depth	15	2	5	17	0.5	10	15
Date Collected	10/3/2013	10/3/2013	10/3/2013	10/3/2013	10/1/2013	10/1/2013	10/1/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Surface	Subsurface	Subsurface	Surface	Subsurface	Subsurface
Constituent	CAS No.						
Volatile Organics (mg/kg) (continued)							
Chloroethane	75003	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
Chloroform	67663	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
Chloromethane	74873	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
Cis-1,2-Dichloroethene	156592	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
Cis-1,3-Dichloropropene	10061015	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
Dibromomethane	74953	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
Dichlorodifluoromethane	75718	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
Ethylbenzene	100414	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
Hexachlorobutadiene	87683	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
Isopropylbenzene	98828	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
M,P-Xylenes	179601231	NA	< 0.012	< 0.011	NA	< 0.013	NA
Methyl Tert-Butyl Ether	1634044	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
Methylene Chloride	75092	NA	< 0.012	< 0.011	NA	< 0.013	NA
Naphthalene	91203	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
N-Butylbenzene	104518	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
N-Propylbenzene	103651	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
O-Xylene	95476	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
Sec-Butylbenzene	135988	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
Styrene	100425	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
Tert-Butylbenzene	98066	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
Tetrachloroethene	127184	NA	0.113	0.166	NA	2.48	NA
Toluene	108883	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
Total Xylenes	1330207	NA	< 0.012	< 0.011	NA	< 0.013	NA
Trans-1,2-Dichloroethene	156605	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
Trans-1,3-Dichloropropene	10061026	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
Trichloroethene	79016	NA	< 0.006	< 0.0057	NA	0.0039	NA
Trichlorofluoromethane	75694	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
Vinyl Acetate	108054	NA	< 0.03	< 0.028	NA	< 0.033	NA
Vinyl Chloride	75014	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
Dibromochloropropane (DBCP)	67708832	NA	< 0.006	< 0.0057	NA	< 0.0067	NA
VOCs - Method 3810 Mod							
Benzene	71432	NA	NA	NA	NA	NA	NA
Cis-1,2-Dichloroethene	156592	NA	NA	NA	NA	NA	NA
Ethylbenzene	100414	NA	NA	NA	NA	NA	NA
Tetrachloroethene	127184	NA	NA	NA	NA	NA	NA
Toluene	108883	NA	NA	NA	NA	NA	NA
Trichloroethene	79016	NA	NA	NA	NA	NA	NA
Total Xylenes	1330207	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-3-15	A10-3-2	A10-3-5	A10-3-INT	A10-4-0.5	A10-4-10	A10-4-15
Sample Depth	15	2	5	17	0.5	10	15
Date Collected	10/3/2013	10/3/2013	10/3/2013	10/3/2013	10/1/2013	10/1/2013	10/1/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Surface	Subsurface	Subsurface	Surface	Subsurface	Subsurface
Constituent	CAS No.						
Semi-Volatile Organics (mg/kg)							
1,2,4-Trichlorobenzene	120821	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95501	NA	NA	NA	NA	NA	NA
1,2-Diphenylhydrazine	122667	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541731	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106467	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene	90120	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	95954	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	88062	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	120832	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	105679	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	51285	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	121142	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	606202	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	91587	NA	NA	NA	NA	NA	NA
2-Chlorophenol	95578	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	91576	NA	NA	NA	NA	NA	NA
2-Methylphenol	95487	NA	NA	NA	NA	NA	NA
2-Nitroaniline	88744	NA	NA	NA	NA	NA	NA
2-Nitrophenol	88755	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	91941	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99092	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-Methylphenol	534521	NA	NA	NA	NA	NA	NA
4-Bromophenyl Phenyl Ether	101553	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	59507	NA	NA	NA	NA	NA	NA
4-Chloroaniline	106478	NA	NA	NA	NA	NA	NA
4-Chlorophenyl Phenyl Ether	7005723	NA	NA	NA	NA	NA	NA
4-Nitroaniline	100016	NA	NA	NA	NA	NA	NA
4-Nitrophenol	100027	NA	NA	NA	NA	NA	NA
Acenaphthene	83329	NA	NA	NA	NA	NA	NA
Acenaphthylene	208968	NA	NA	NA	NA	NA	NA
Aniline	62533	NA	NA	NA	NA	NA	NA
Anthracene	120127	NA	NA	NA	NA	NA	NA
Benzidine	92875	NA	NA	NA	NA	NA	NA
Benzo(A)Anthracene	56553	NA	NA	NA	NA	NA	NA
Benzo(A)Pyrene	50328	NA	NA	NA	NA	NA	NA
Benzo(B)Fluoranthene	205992	NA	NA	NA	NA	NA	NA
Benzo(G,H,I)Perylene	191242	NA	NA	NA	NA	NA	NA
Benzo(K)Fluoranthene	207089	NA	NA	NA	NA	NA	NA
Benzoic Acid	65850	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	100516	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethoxy)Methane	111911	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethyl)Ether	111444	NA	NA	NA	NA	NA	NA
Bis(2-Chloroisopropyl)Ether	108601	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-3-15	A10-3-2	A10-3-5	A10-3-INT	A10-4-0.5	A10-4-10	A10-4-15
Sample Depth	15	2	5	17	0.5	10	15
Date Collected	10/3/2013	10/3/2013	10/3/2013	10/3/2013	10/1/2013	10/1/2013	10/1/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Surface	Subsurface	Subsurface	Surface	Subsurface	Subsurface
Constituent	CAS No.						
Semi-Volatile Organics (mg/kg) (continued)							
Bis(2-Ethylhexyl) Phthalate	117817	NA	NA	NA	NA	NA	NA
Butyl Benzyl Phthalate	85687	NA	NA	NA	NA	NA	NA
Carbazole	86748	NA	NA	NA	NA	NA	NA
Chrysene	218019	NA	NA	NA	NA	NA	NA
Dibenz(A,H)Anthracene	53703	NA	NA	NA	NA	NA	NA
Dibenzofuran	132649	NA	NA	NA	NA	NA	NA
Diethyl Phthalate	84662	NA	NA	NA	NA	NA	NA
Dimethyl Phthalate	131113	NA	NA	NA	NA	NA	NA
Di-N-Butyl Phthalate	84742	NA	NA	NA	NA	NA	NA
Di-N-Octyl Phthalate	117840	NA	NA	NA	NA	NA	NA
Fluoranthene	206440	NA	NA	NA	NA	NA	NA
Fluorene	86737	NA	NA	NA	NA	NA	NA
Hexachloro-1,3-Cyclopentadiene	77474	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	118741	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	87683	NA	NA	NA	NA	NA	NA
Hexachloroethane	67721	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-Cd)Pyrene	193395	NA	NA	NA	NA	NA	NA
Isophorone	78591	NA	NA	NA	NA	NA	NA
M-,P-Cresol Mixture	15831104	NA	NA	NA	NA	NA	NA
Naphthalene	91203	NA	NA	NA	NA	NA	NA
Nitrobenzene	98953	NA	NA	NA	NA	NA	NA
N-Nitrosodimethylamine	62759	NA	NA	NA	NA	NA	NA
N-Nitrosodi-N-Propylamine	621647	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	86306	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Phenanthrene	85018	NA	NA	NA	NA	NA	NA
Phenol	108952	NA	NA	NA	NA	NA	NA
Pyrene	129000	NA	NA	NA	NA	NA	NA
Pyridine	110861	NA	NA	NA	NA	NA	NA
PCBs (mg/kg)							
Pcb- 1016	12674112	NA	NA	NA	NA	NA	NA
Pcb- 1221	11104282	NA	NA	NA	NA	NA	NA
Pcb- 1232	11141165	NA	NA	NA	NA	NA	NA
Pcb- 1242	53469219	NA	NA	NA	NA	NA	NA
Pcb- 1248	12672296	NA	NA	NA	NA	NA	NA
Pcb- 1254	11097691	NA	NA	NA	NA	NA	NA
Pcb- 1260	11096825	NA	NA	NA	NA	NA	NA
Total Petroleum Hydrocarbons (TPH) (mg/kg)							
DRO (C10-C28) Range	DRO	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-3-15 15 10/3/2013 Investigation Eastern Area A-10 Subsurface	A10-3-2 2 10/3/2013 Investigation Eastern Area A-10 Surface	A10-3-5 5 10/3/2013 Investigation Eastern Area A-10 Subsurface	A10-3-INT 17 10/3/2013 Investigation Eastern Area A-10 Subsurface	A10-4-0.5 0.5 10/1/2013 Investigation Eastern Area A-10 Surface	A10-4-10 10 10/1/2013 Investigation Eastern Area A-10 Subsurface	A10-4-15 15 10/1/2013 Investigation Eastern Area A-10 Subsurface
Herbicides/Pesticides (mg/kg)							
2,4,5-T	93765	NA	NA	NA	NA	NA	NA
2,4-D	94757	NA	NA	NA	NA	NA	NA
2,4-Db	94826	NA	NA	NA	NA	NA	NA
4,4'-DDD	72548	NA	NA	NA	NA	NA	NA
4,4'-DDE	72559	NA	NA	NA	NA	NA	NA
4,4'-DDT	50293	NA	NA	NA	NA	NA	NA
Aldrin	309002	NA	NA	NA	NA	NA	NA
Alpha-BHC	319846	NA	NA	NA	NA	NA	NA
Beta-BHC	319857	NA	NA	NA	NA	NA	NA
Delta-BHC	319868	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	5103719	NA	NA	NA	NA	NA	NA
Dalapon	75990	NA	NA	NA	NA	NA	NA
Dicamba	1918009	NA	NA	NA	NA	NA	NA
Dichoroprop	120365	NA	NA	NA	NA	NA	NA
Dieldrin	60571	NA	NA	NA	NA	NA	NA
Dinoseb	88857	NA	NA	NA	NA	NA	NA
Endosulfan I	959988	NA	NA	NA	NA	NA	NA
Endosulfan II	33213659	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	1031078	NA	NA	NA	NA	NA	NA
Endrin	72208	NA	NA	NA	NA	NA	NA
Endrin aldehyde	7421934	NA	NA	NA	NA	NA	NA
Endrin ketone	53494705	NA	NA	NA	NA	NA	NA
Gamma-BHC	58899	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	5103742	NA	NA	NA	NA	NA	NA
Heptachlor	76448	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024573	NA	NA	NA	NA	NA	NA
Mcpa	94746	NA	NA	NA	NA	NA	NA
Mcpp	93652	NA	NA	NA	NA	NA	NA
Methoxychlor	72435	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Silvex (2,4,5-TP)	93721	NA	NA	NA	NA	NA	NA
Toxaphene	8001352	NA	NA	NA	NA	NA	NA
Total Metals (mg/kg)							
Aluminum	7429905	NA	NA	NA	NA	NA	NA
Antimony	7440360	NA	NA	NA	NA	NA	NA
Arsenic	7440382	1.4	43.2	9.7	1.1	3.2	4.6
Barium	7440393	26.2	539	283	44.1	167	361
Beryllium	7440417	NA	NA	NA	NA	NA	837
Boron	7440428	NA	NA	NA	NA	NA	NA
Cadmium	7440439	< 0.18	7.3	3.6	< 0.17	2	3.7
Calcium	7440702	NA	NA	NA	NA	NA	9.4
Chromium	7440473	1.9	115	48.1	1.3	28.6	NA
Cobalt	7440484	NA	NA	NA	NA	33.200001	102

Risk-Based Remedies
RBR Consulting, Inc.

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-3-15	A10-3-2	A10-3-5	A10-3-INT	A10-4-0.5	A10-4-10	A10-4-15
Sample Depth	15	2	5	17	0.5	10	15
Date Collected	10/3/2013	10/3/2013	10/3/2013	10/3/2013	10/1/2013	10/1/2013	10/1/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Surface	Subsurface	Subsurface	Surface	Subsurface	Subsurface
Constituent	CAS No.						
Total Metals (mg/kg) (continued)							
Copper	7440508	NA	NA	NA	NA	NA	NA
Iron	7439896	NA	NA	NA	NA	NA	NA
Lead	7439921	2.4	911	290	2.5	177	410
Lithium	7439932	NA	NA	NA	NA	NA	NA
Manganese	7439965	NA	NA	NA	NA	NA	NA
Magnesium	7439954	NA	NA	NA	NA	NA	NA
Mercury	7439976	< 0.041	0.73	0.79	< 0.041	0.094	0.1
Molybdenum	7439987	NA	NA	NA	NA	NA	NA
Nickel	7440020	NA	NA	NA	NA	NA	NA
Potassium	7440097	NA	NA	NA	NA	NA	NA
Selenium	7782492	< 0.91	< 5.1	< 1.9	< 0.87	< 0.89	< 5.1
Silver	7440224	< 0.46	< 2.5	< 0.94	< 0.43	< 0.45	< 2.6
Sodium	7440235	NA	NA	NA	NA	NA	NA
Strontium	7440246	NA	NA	NA	NA	NA	NA
Thallium	7440280	NA	NA	NA	NA	NA	NA
Tin	7440315	NA	NA	NA	NA	NA	NA
Titanium	7440326	NA	NA	NA	NA	NA	NA
Vanadium	7440622	NA	NA	NA	NA	NA	NA
Zinc	7440666	NA	NA	NA	NA	NA	NA
Other Parameters							
PH	PH	NA	NA	NA	NA	NA	NA
Total Organic Carbon	1012	NA	NA	NA	NA	NA	NA

Notes:
 NA - Not Analyzed.
 J - Estimated value.
 R- Rejected value.

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-4-2 2 10/1/2013 Investigation Eastern Area A-10 Surface	A10-4-5 5 10/1/2013 Investigation Eastern Area A-10 Subsurface	A10-4-Clay 27 10/1/2013 Investigation Eastern Area A-10 Subsurface	A10-4-INT 17 10/1/2013 Investigation Eastern Area A-10 Subsurface	A10-5-0.5 0.5 10/3/2013 Investigation Eastern Area A-10 Surface	A10-5-10 10 10/3/2013 Investigation Eastern Area A-10 Subsurface	A10-5-15 15 10/3/2013 Investigation Eastern Area A-10 Subsurface
Volatile Organics (mg/kg)							
1,1,1,2-Tetrachloroethane	630206 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
1,1,1-Trichloroethane	71556 0.0148	0.0028 J	< 0.0029	NA	NA	0.0031 J	NA
1,1,2,2-Tetrachloroethane	79345 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
1,1,2-Trichloroethane	79005 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
1,1-Dichloroethane	75343 < 0.007	< 0.0053	< 0.0029	NA	NA	0.0115	NA
1,1-Dichloroethene	75354 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
1,1-Dichloropropene	563586 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
1,2,3-Trichlorobenzene	87616 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
1,2,3-Trichloropropane	96184 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
1,2,4-Trichlorobenzene	120821 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
1,2,4-Trimethylbenzene	95636 0.0756 J	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
1,2-Dibromoethane	106934 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
1,2-Dichlorobenzene	95501 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
1,2-Dichloroethane	107062 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
1,2-Dichloroethene, Total	540590 NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	78875 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
1,3,5-Trimethylbenzene	108678 0.0681 J	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
1,3-Dichlorobenzene	541731 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
1,3-Dichloropropane	142289 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
1,4-Dichlorobenzene	106467 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
1,4-Dioxane	123911 < 0.28	< 0.21	< 0.12	NA	NA	< 0.16	NA
2,2-Dichloropropane	594207 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
2-Butanone	78933 < 0.035	< 0.027	< 0.014	NA	NA	< 0.02	NA
2-Chloroethyl Vinyl Ether	110758 < 0.035	< 0.027	< 0.014	NA	NA	< 0.02	NA
2-Chlorotoluene	95498 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
2-Hexanone (methyl butyl ketone)	591786 < 0.035	< 0.027	< 0.014	NA	NA	< 0.02	NA
3-Chloro-1,2-Dibromopropane	96128 NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	106434 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
4-Isopropyltoluene	99876 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
4-Methyl-2-Pentanone	108101 < 0.035	< 0.027	< 0.014	NA	NA	< 0.02	NA
Acetone	67641 < 0.07	< 0.053	< 0.029	NA	NA	< 0.04	NA
Acrolein	107028 < 0.035	< 0.027	< 0.014	NA	NA	< 0.02	NA
Acrylonitrile	107131 < 0.035	< 0.027	< 0.014	NA	NA	< 0.02	NA
Benzene	71432 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Bromobenzene	108861 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Bromochloromethane	74975 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Bromodichloromethane	75274 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Bromoform	75252 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Bromomethane	74839 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Carbon Disulfide	75150 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Carbon Tetrachloride	56235 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Chlorobenzene	108907 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Dibromochloromethane	124481 < 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-4-2 2 10/1/2013 Investigation Eastern Area A-10 Surface	A10-4-5 5 10/1/2013 Investigation Eastern Area A-10 Subsurface	A10-4-Clay 27 10/1/2013 Investigation Eastern Area A-10 Subsurface	A10-4-INT 17 10/1/2013 Investigation Eastern Area A-10 Subsurface	A10-5-0.5 0.5 10/3/2013 Investigation Eastern Area A-10 Surface	A10-5-10 10 10/3/2013 Investigation Eastern Area A-10 Subsurface	A10-5-15 15 10/3/2013 Investigation Eastern Area A-10 Subsurface	
Volatile Organics (mg/kg) (continued)								
Chloroethane	75003	< 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Chloroform	67663	< 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Chloromethane	74873	< 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Cis-1,2-Dichloroethene	156592	< 0.007	< 0.0053	< 0.0029	NA	NA	0.0032	J NA
Cis-1,3-Dichloropropene	10061015	< 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Dibromomethane	74953	< 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Dichlorodifluoromethane	75718	< 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Ethylbenzene	100414	0.0753	J < 0.0053	< 0.0029	NA	NA	< 0.004	NA
Hexachlorobutadiene	87683	< 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Isopropylbenzene	98828	< 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
M,P-Xylenes	179601231	0.536	J 0.437	J < 0.0058	NA	NA	< 0.008	NA
Methyl Tert-Butyl Ether	1634044	< 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Methylene Chloride	75092	< 0.014	< 0.011	< 0.0058	NA	NA	< 0.008	NA
Naphthalene	91203	< 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
N-Butylbenzene	104518	< 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
N-Propylbenzene	103651	< 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
O-Xylene	95476	0.414	0.168	J < 0.0029	NA	NA	< 0.004	NA
Sec-Butylbenzene	135988	< 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Styrene	100425	< 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Tert-Butylbenzene	98066	< 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Tetrachloroethene	127184	8.62	10	< 0.0029	NA	NA	0.0786	NA
Toluene	108883	0.16	J 0.325	< 0.0029	NA	NA	< 0.004	NA
Total Xylenes	1330207	0.95	0.605	< 0.0058	NA	NA	< 0.008	NA
Trans-1,2-Dichloroethene	156605	< 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Trans-1,3-Dichloropropene	10061026	< 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Trichloroethene	79016	0.0038	J 0.0103	< 0.0029	NA	NA	0.0065	NA
Trichlorofluoromethane	75694	< 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Vinyl Acetate	108054	< 0.035	< 0.027	< 0.014	NA	NA	< 0.02	NA
Vinyl Chloride	75014	< 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
Dibromochloropropane (DBCP)	67708832	< 0.007	< 0.0053	< 0.0029	NA	NA	< 0.004	NA
VOCs - Method 3810 Mod								
Benzene	71432	NA	NA	NA	NA	NA	NA	NA
Cis-1,2-Dichloroethene	156592	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100414	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	127184	NA	NA	NA	NA	NA	NA	NA
Toluene	108883	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	79016	NA	NA	NA	NA	NA	NA	NA
Total Xylenes	1330207	NA	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-4-2 2 10/1/2013 Investigation Eastern Area A-10 Surface	A10-4-5 5 10/1/2013 Investigation Eastern Area A-10 Subsurface	A10-4-Clay 27 10/1/2013 Investigation Eastern Area A-10 Subsurface	A10-4-INT 17 10/1/2013 Investigation Eastern Area A-10 Subsurface	A10-5-0.5 0.5 10/3/2013 Investigation Eastern Area A-10 Surface	A10-5-10 10 10/3/2013 Investigation Eastern Area A-10 Subsurface	A10-5-15 15 10/3/2013 Investigation Eastern Area A-10 Subsurface
Semi-Volatile Organics (mg/kg)							
1,2,4-Trichlorobenzene	120821	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95501	NA	NA	NA	NA	NA	NA
1,2-Diphenylhydrazine	122667	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541731	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106467	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene	90120	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	95954	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	88062	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	120832	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	105679	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	51285	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	121142	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	606202	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	91587	NA	NA	NA	NA	NA	NA
2-Chlorophenol	95578	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	91576	NA	NA	NA	NA	NA	NA
2-Methylphenol	95487	NA	NA	NA	NA	NA	NA
2-Nitroaniline	88744	NA	NA	NA	NA	NA	NA
2-Nitrophenol	88755	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	91941	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99092	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-Methylphenol	534521	NA	NA	NA	NA	NA	NA
4-Bromophenyl Phenyl Ether	101553	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	59507	NA	NA	NA	NA	NA	NA
4-Chloroaniline	106478	NA	NA	NA	NA	NA	NA
4-Chlorophenyl Phenyl Ether	7005723	NA	NA	NA	NA	NA	NA
4-Nitroaniline	100016	NA	NA	NA	NA	NA	NA
4-Nitrophenol	100027	NA	NA	NA	NA	NA	NA
Acenaphthene	83329	NA	NA	NA	NA	NA	NA
Acenaphthylene	208968	NA	NA	NA	NA	NA	NA
Aniline	62533	NA	NA	NA	NA	NA	NA
Anthracene	120127	NA	NA	NA	NA	NA	NA
Benzo(a)Anthracene	56553	NA	NA	NA	NA	NA	NA
Benzo(a)Pyrene	50328	NA	NA	NA	NA	NA	NA
Benzo(b)Fluoranthene	205992	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)Perylene	191242	NA	NA	NA	NA	NA	NA
Benzo(k)Fluoranthene	207089	NA	NA	NA	NA	NA	NA
Benzoic Acid	65850	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	100516	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethoxy)Methane	111911	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethyl)Ether	111444	NA	NA	NA	NA	NA	NA
Bis(2-Chloroisopropyl)Ether	108601	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-4-2	A10-4-5	A10-4-Clay	A10-4-JNT	A10-5-0.5	A10-5-10	A10-5-15
Sample Depth	2	5	27	17	0.5	10	15
Date Collected	10/1/2013	10/1/2013	10/1/2013	10/1/2013	10/3/2013	10/3/2013	10/3/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Surface	Subsurface	Subsurface	Subsurface	Surface	Subsurface	Subsurface
Constituent	CAS No.						
Semi-Volatile Organics (mg/kg) (continued)							
Bis(2-Ethylhexyl) Phthalate	117817	NA	NA	NA	NA	NA	NA
Butyl Benzyl Phthalate	85687	NA	NA	NA	NA	NA	NA
Carbazole	86748	NA	NA	NA	NA	NA	NA
Chrysene	218019	NA	NA	NA	NA	NA	NA
Dibenz(A,H)Anthracene	53703	NA	NA	NA	NA	NA	NA
Dibenzofuran	132649	NA	NA	NA	NA	NA	NA
Diethyl Phthalate	84662	NA	NA	NA	NA	NA	NA
Dimethyl Phthalate	131113	NA	NA	NA	NA	NA	NA
Di-N-Butyl Phthalate	84742	NA	NA	NA	NA	NA	NA
Di-N-Octyl Phthalate	117840	NA	NA	NA	NA	NA	NA
Fluoranthene	206440	NA	NA	NA	NA	NA	NA
Fluorene	86737	NA	NA	NA	NA	NA	NA
Hexachloro-1,3-Cyclopentadiene	77474	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	118741	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	87683	NA	NA	NA	NA	NA	NA
Hexachloroethane	67721	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-Cd)Pyrene	193395	NA	NA	NA	NA	NA	NA
Isophorone	78591	NA	NA	NA	NA	NA	NA
M-,P-Cresol Mixture	15831104	NA	NA	NA	NA	NA	NA
Naphthalene	91203	NA	NA	NA	NA	NA	NA
Nitrobenzene	98953	NA	NA	NA	NA	NA	NA
N-Nitrosodimethylamine	62759	NA	NA	NA	NA	NA	NA
N-Nitrosodi-N-Propylamine	621647	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	86306	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Phenanthrene	85018	NA	NA	NA	NA	NA	NA
Phenol	108952	NA	NA	NA	NA	NA	NA
Pyrene	129000	NA	NA	NA	NA	NA	NA
Pyridine	110861	NA	NA	NA	NA	NA	NA
PCBs (mg/kg)							
Pcb- 1016	12674112	NA	NA	NA	NA	NA	NA
Pcb- 1221	11104282	NA	NA	NA	NA	NA	NA
Pcb- 1232	11141165	NA	NA	NA	NA	NA	NA
Pcb- 1242	53469219	NA	NA	NA	NA	NA	NA
Pcb- 1248	12672296	NA	NA	NA	NA	NA	NA
Pcb- 1254	11097691	NA	NA	NA	NA	NA	NA
Pcb- 1260	11096825	NA	NA	NA	NA	NA	NA
Total Petroleum Hydrocarbons (TPH) (mg/kg)							
DRO (C10-C28) Range	DRO	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Constituent	Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-4-2 2 10/1/2013 Investigation Eastern Area A-10 Surface	A10-4-5 5 10/1/2013 Investigation Eastern Area A-10 Subsurface	A10-4-Clay 27 10/1/2013 Investigation Eastern Area A-10 Subsurface	A10-4-INT 17 10/1/2013 Investigation Eastern Area A-10 Subsurface	A10-5-0.5 0.5 10/3/2013 Investigation Eastern Area A-10 Surface	A10-5-10 10 10/3/2013 Investigation Eastern Area A-10 Subsurface	A10-5-15 15 10/3/2013 Investigation Eastern Area A-10 Subsurface
Herbicides/Pesticides (mg/kg)								
2,4,5-T	93765	NA	NA	NA	NA	NA	NA	NA
2,4-D	94757	NA	NA	NA	NA	NA	NA	NA
2,4-Db	94826	NA	NA	NA	NA	NA	NA	NA
4,4'-DDD	72548	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	72559	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	50293	NA	NA	NA	NA	NA	NA	NA
Aldrin	309002	NA	NA	NA	NA	NA	NA	NA
Alpha-BHC	319846	NA	NA	NA	NA	NA	NA	NA
Beta-BHC	319857	NA	NA	NA	NA	NA	NA	NA
Delta-BHC	319868	NA	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	5103719	NA	NA	NA	NA	NA	NA	NA
Dalapon	75990	NA	NA	NA	NA	NA	NA	NA
Dicamba	1918009	NA	NA	NA	NA	NA	NA	NA
Dichloroprop	120365	NA	NA	NA	NA	NA	NA	NA
Dieldrin	60571	NA	NA	NA	NA	NA	NA	NA
Dinoseb	88857	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	959988	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	33213659	NA	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	1031078	NA	NA	NA	NA	NA	NA	NA
Endrin	72208	NA	NA	NA	NA	NA	NA	NA
Endrin aldehyde	7421934	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	53494705	NA	NA	NA	NA	NA	NA	NA
Gamma-BHC	58899	NA	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	5103742	NA	NA	NA	NA	NA	NA	NA
Heptachlor	76448	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024573	NA	NA	NA	NA	NA	NA	NA
Mcpa	94746	NA	NA	NA	NA	NA	NA	NA
Mcpp	93652	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72435	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA	NA
Silvex (2,4,5-TP)	93721	NA	NA	NA	NA	NA	NA	NA
Toxaphene	8001352	NA	NA	NA	NA	NA	NA	NA
Total Metals (mg/kg)								
Aluminum	7429905	NA	NA	NA	NA	NA	NA	NA
Antimony	7440360	NA	NA	NA	NA	NA	NA	NA
Arsenic	7440382	6.9	10.8	NA	1.6	5	4.3	1.6
Barium	7440393	334	1730	NA	37.599998	159	65.800003	20.299999
Beryllium	7440417	NA	NA	NA	NA	NA	NA	NA
Boron	7440428	NA	NA	NA	NA	NA	NA	NA
Cadmium	7440439	16.6	14	NA	< 0.21	1.8	< 0.41	< 0.21
Calcium	7440702	NA	NA	NA	NA	NA	NA	NA
Chromium	7440473	164	98	NA	2.6	39.200001	10.8	2.8
Cobalt	7440484	NA	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-4-2	A10-4-5	A10-4-Clay	A10-4-INT	A10-5-0.5	A10-5-10	A10-5-15
Sample Depth	2	5	27	17	0.5	10	15
Date Collected	10/1/2013	10/1/2013	10/1/2013	10/1/2013	10/3/2013	10/3/2013	10/3/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Surface	Subsurface	Subsurface	Subsurface	Surface	Subsurface	Subsurface
Constituent	CAS No.						
Total Metals (mg/kg) (continued)							
Copper	7440508	NA	NA	NA	NA	NA	NA
Iron	7439896	NA	NA	NA	NA	NA	NA
Lead	7439921	647	4970	NA	4.2	158	3.4
Lithium	7439932	NA	NA	NA	NA	NA	NA
Manganese	7439965	NA	NA	NA	NA	NA	NA
Magnesium	7439954	NA	NA	NA	NA	NA	NA
Mercury	7439976	3.5	0.79	NA	0.062	0.11	< 0.043
Molybdenum	7439987	NA	NA	NA	NA	NA	NA
Nickel	7440020	NA	NA	NA	NA	NA	NA
Potassium	7440097	NA	NA	NA	NA	NA	NA
Selenium	7782492	< 3.9	< 3	NA	< 1.1	< 2	< 2.1
Silver	7440224	< 1.9	< 1.8	NA	< 0.53	< 0.5	< 1
Sodium	7440235	NA	NA	NA	NA	NA	NA
Strontium	7440246	NA	NA	NA	NA	NA	NA
Thallium	7440280	NA	NA	NA	NA	NA	NA
Tin	7440315	NA	NA	NA	NA	NA	NA
Titanium	7440326	NA	NA	NA	NA	NA	NA
Vanadium	7440622	NA	NA	NA	NA	NA	NA
Zinc	7440666	NA	NA	NA	NA	NA	NA
Other Parameters							
PH	PH	NA	NA	NA	NA	NA	NA
Total Organic Carbon	1012	NA	NA	NA	NA	NA	NA

Notes:
 NA - Not Analyzed.
 J - Estimated value.
 R- Rejected value.

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-5-2 2 10/3/2013 Investigation Eastern Area A-10 Surface	A10-5-5 5 10/3/2013 Investigation Eastern Area A-10 Subsurface	A10-5-INT 16 10/3/2013 Investigation Eastern Area A-10 Subsurface	A10-6-10 10 12/18/2013 Investigation Eastern Area A-10 Subsurface	A10-6-15 15 12/18/2013 Investigation Eastern Area A-10 Subsurface	A10-6-2 2 12/18/2013 Investigation Eastern Area A-10 Surface	A10-6-20 20 12/18/2013 Investigation Eastern Area A-10 Subsurface
Volatile Organics (mg/kg)							
1,1,1,2-Tetrachloroethane	630206 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	71556 0.0024 J	0.0016 J	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	79345 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	79005 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
1,1-Dichloroethane	75343 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
1,1-Dichloroethene	75354 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
1,1-Dichloropropene	563586 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	87616 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
1,2,3-Trichloropropane	96184 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	120821 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	95636 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
1,2-Dibromoethane	106934 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95501 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
1,2-Dichloroethane	107062 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
1,2-Dichloroethene, Total	540590		NA	NA	NA	NA	NA
1,2-Dichloropropane	78875 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	108678 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541731 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
1,3-Dichloropropane	142289 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106467 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
1,4-Dioxane	123911 < 0.25	< 0.2	NA	NA	NA	NA	NA
2,2-Dichloropropane	594207 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
2-Butanone	78933 < 0.032	< 0.026	NA	NA	NA	NA	NA
2-Chloroethyl Vinyl Ether	110758 < 0.032	< 0.026	NA	NA	NA	NA	NA
2-Chlorotoluene	95498 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
2-Hexanone (methyl butyl ketone)	591786 < 0.032	< 0.026	NA	NA	NA	NA	NA
3-Chloro-1,2-Dibromopropane	96128	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	106434 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
4-Isopropyltoluene	99876 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	108101 < 0.032	< 0.026	NA	NA	NA	NA	NA
Acetone	67641 < 0.063	< 0.051	NA	NA	NA	NA	NA
Acrolein	107028 < 0.032	< 0.026	NA	NA	NA	NA	NA
Acrylonitrile	107131 < 0.032	< 0.026	NA	NA	NA	NA	NA
Benzene	71432 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
Bromobenzene	108861 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
Bromochloromethane	74975 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
Bromodichloromethane	75274 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
Bromoform	75252 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
Bromomethane	74839 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
Carbon Disulfide	75150 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
Carbon Tetrachloride	56235 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
Chlorobenzene	108907 < 0.0063	< 0.0051	NA	NA	NA	NA	NA
Dibromochloromethane	124481 < 0.0063	< 0.0051	NA	NA	NA	NA	NA

Risk-Based Remedies
RBR Consulting, Inc.

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-5-2	A10-5-5	A10-5-INT	A10-6-10	A10-6-15	A10-6-2	A10-6-20
Sample Depth	2	5	16	10	15	2	20
Date Collected	10/3/2013	10/3/2013	10/3/2013	12/18/2013	12/18/2013	12/18/2013	12/18/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Surface	Subsurface	Subsurface	Subsurface	Subsurface	Surface	Subsurface
Constituent	CAS No.						
Volatile Organics (mg/kg) (continued)							
Chloroethane	75003	< 0.0063	< 0.0051	NA	NA	NA	NA
Chloroform	67663	< 0.0063	< 0.0051	NA	NA	NA	NA
Chloromethane	74873	< 0.0063	< 0.0051	NA	NA	NA	NA
Cis-1,2-Dichloroethene	156592	< 0.0063	< 0.0051	NA	NA	NA	NA
Cis-1,3-Dichloropropene	10061015	< 0.0063	< 0.0051	NA	NA	NA	NA
Dibromomethane	74953	< 0.0063	< 0.0051	NA	NA	NA	NA
Dichlorodifluoromethane	75718	< 0.0063	< 0.0051	NA	NA	NA	NA
Ethylbenzene	100414	< 0.0063	< 0.0051	NA	NA	NA	NA
Hexachlorobutadiene	87683	< 0.0063	< 0.0051	NA	NA	NA	NA
Isopropylbenzene	98828	< 0.0063	< 0.0051	NA	NA	NA	NA
M,P-Xylenes	179601231	< 0.013	< 0.01	NA	NA	NA	NA
Methyl Tert-Butyl Ether	1634044	< 0.0063	< 0.0051	NA	NA	NA	NA
Methylene Chloride	75092	< 0.013	< 0.01	NA	NA	NA	NA
Naphthalene	91203	< 0.0063	< 0.0051	NA	NA	NA	NA
N-Butylbenzene	104518	< 0.0063	< 0.0051	NA	NA	NA	NA
N-Propylbenzene	103651	< 0.0063	< 0.0051	NA	NA	NA	NA
O-Xylene	95476	< 0.0063	< 0.0051	NA	NA	NA	NA
Sec-Butylbenzene	135988	< 0.0063	< 0.0051	NA	NA	NA	NA
Styrene	100425	< 0.0063	< 0.0051	NA	NA	NA	NA
Tert-Butylbenzene	98066	< 0.0063	< 0.0051	NA	NA	NA	NA
Tetrachloroethene	127184	0.557	0.0526	NA	NA	NA	NA
Toluene	108883	< 0.0063	< 0.0051	NA	NA	NA	NA
Total Xylenes	1330207	< 0.013	< 0.01	NA	NA	NA	NA
Trans-1,2-Dichloroethene	156605	< 0.0063	< 0.0051	NA	NA	NA	NA
Trans-1,3-Dichloropropene	10061026	< 0.0063	< 0.0051	NA	NA	NA	NA
Trichloroethene	79016	< 0.0086	< 0.0051	NA	NA	NA	NA
Trichlorofluoromethane	75694	< 0.0063	< 0.0051	NA	NA	NA	NA
Vinyl Acetate	108054	< 0.032	< 0.026	NA	NA	NA	NA
Vinyl Chloride	75014	< 0.0063	< 0.0051	NA	NA	NA	NA
Dibromochloropropane (DBCP)	67708832	< 0.0063	< 0.0051	NA	NA	NA	NA
VOCs - Method 3810 Mod							
Benzene	71432	NA	NA	NA	< 0.0084 J	< 0.0084 J	< 0.0084 J
Cis-1,2-Dichloroethene	156592	NA	NA	NA	0.0189 J	< 0.0084 J	0.0844 J
Ethylbenzene	100414	NA	NA	NA	< 0.0084 J	< 0.0084 J	< 0.0084 J
Tetrachloroethene	127184	NA	NA	NA	0.017 J	< 0.0084 J	0.37 J
Toluene	108883	NA	NA	NA	< 0.0084 J	< 0.0084 J	< 0.0084 J
Trichloroethene	79016	NA	NA	NA	0.0088 J	< 0.0084 J	0.0234 J
Total Xylenes	1330207	NA	NA	NA	< 0.0084 J	< 0.0084 J	< 0.0084 J

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-5-2 2 10/3/2013 Investigation Eastern Area A-10 Surface	A10-5-5 5 10/3/2013 Investigation Eastern Area A-10 Subsurface	A10-5-INT 16 10/3/2013 Investigation Eastern Area A-10 Subsurface	A10-6-10 10 12/18/2013 Investigation Eastern Area A-10 Subsurface	A10-6-15 15 12/18/2013 Investigation Eastern Area A-10 Subsurface	A10-6-2 2 12/18/2013 Investigation Eastern Area A-10 Surface	A10-6-20 20 12/18/2013 Investigation Eastern Area A-10 Subsurface
Semi-Volatile Organics (mg/kg)							
1,2,4-Trichlorobenzene	120821	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95501	NA	NA	NA	NA	NA	NA
1,2-Diphenylhydrazine	122667	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541731	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106467	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene	90120	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	95954	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	88062	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	120832	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	105679	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	51285	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	121142	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	606202	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	91587	NA	NA	NA	NA	NA	NA
2-Chlorophenol	95578	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	91576	NA	NA	NA	NA	NA	NA
2-Methylphenol	95487	NA	NA	NA	NA	NA	NA
2-Nitroaniline	88744	NA	NA	NA	NA	NA	NA
2-Nitrophenol	88755	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	91941	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99092	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-Methylphenol	534521	NA	NA	NA	NA	NA	NA
4-Bromophenyl Phenyl Ether	101553	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	59507	NA	NA	NA	NA	NA	NA
4-Chloroaniline	106478	NA	NA	NA	NA	NA	NA
4-Chlorophenyl Phenyl Ether	7005723	NA	NA	NA	NA	NA	NA
4-Nitroaniline	100016	NA	NA	NA	NA	NA	NA
4-Nitrophenol	100027	NA	NA	NA	NA	NA	NA
Acenaphthene	83329	NA	NA	NA	NA	NA	NA
Acenaphthylene	208968	NA	NA	NA	NA	NA	NA
Aniline	62533	NA	NA	NA	NA	NA	NA
Anthracene	120127	NA	NA	NA	NA	NA	NA
Benzo(a)Anthracene	92875	NA	NA	NA	NA	NA	NA
Benzo(A)Pyrene	56553	NA	NA	NA	NA	NA	NA
Benzo(B)Fluoranthene	50328	NA	NA	NA	NA	NA	NA
Benzo(G,H,I)Perylene	205992	NA	NA	NA	NA	NA	NA
Benzo(K)Fluoranthene	191242	NA	NA	NA	NA	NA	NA
Benzoic Acid	207089	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	65850	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	100516	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethoxy)Methane	111911	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethyl)Ether	111444	NA	NA	NA	NA	NA	NA
Bis(2-Chloroisopropyl)Ether	108601	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-5-2	A10-5-5	A10-5-INT	A10-6-10	A10-6-15	A10-6-2	A10-6-20
Sample Depth	2	5	16	10	15	2	20
Date Collected	10/3/2013	10/3/2013	10/3/2013	12/18/2013	12/18/2013	12/18/2013	12/18/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Surface	Subsurface	Subsurface	Subsurface	Subsurface	Surface	Subsurface
Constituent	CAS No.						
Semi-Volatile Organics (mg/kg) (continued)							
Bis(2-Ethylhexyl) Phthalate	117817	NA	NA	NA	NA	NA	NA
Butyl Benzyl Phthalate	85687	NA	NA	NA	NA	NA	NA
Carbazole	86748	NA	NA	NA	NA	NA	NA
Chrysene	218019	NA	NA	NA	NA	NA	NA
Dibenz(A,H)Anthracene	53703	NA	NA	NA	NA	NA	NA
Dibenzofuran	132649	NA	NA	NA	NA	NA	NA
Diethyl Phthalate	84662	NA	NA	NA	NA	NA	NA
Dimethyl Phthalate	131113	NA	NA	NA	NA	NA	NA
Di-N-Butyl Phthalate	84742	NA	NA	NA	NA	NA	NA
Di-N-Octyl Phthalate	117840	NA	NA	NA	NA	NA	NA
Fluoranthene	206440	NA	NA	NA	NA	NA	NA
Fluorene	86737	NA	NA	NA	NA	NA	NA
Hexachloro-1,3-Cyclopentadiene	77474	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	118741	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	87683	NA	NA	NA	NA	NA	NA
Hexachloroethane	67721	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-Cd)Pyrene	193395	NA	NA	NA	NA	NA	NA
Isophorone	78591	NA	NA	NA	NA	NA	NA
M-,P-Cresol Mixture	15831104	NA	NA	NA	NA	NA	NA
Naphthalene	91203	NA	NA	NA	NA	NA	NA
Nitrobenzene	98953	NA	NA	NA	NA	NA	NA
N-Nitrosodimethylamine	62759	NA	NA	NA	NA	NA	NA
N-Nitrosodi-N-Propylamine	621647	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	86306	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Phenanthrene	85018	NA	NA	NA	NA	NA	NA
Phenol	108952	NA	NA	NA	NA	NA	NA
Pyrene	129000	NA	NA	NA	NA	NA	NA
Pyridine	110861	NA	NA	NA	NA	NA	NA
PCBs (mg/kg)							
Pcb- 1016	12674112	NA	NA	NA	NA	NA	NA
Pcb- 1221	11104282	NA	NA	NA	NA	NA	NA
Pcb- 1232	11141165	NA	NA	NA	NA	NA	NA
Pcb- 1242	53469219	NA	NA	NA	NA	NA	NA
Pcb- 1248	12672296	NA	NA	NA	NA	NA	NA
Pcb- 1254	11097691	NA	NA	NA	NA	NA	NA
Pcb- 1260	11096825	NA	NA	NA	NA	NA	NA
Total Petroleum Hydrocarbons (TPH) (mg/kg)							
DRO (C10-C28) Range	DRO	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-5-2 2 10/3/2013 Investigation Eastern Area A-10 Surface	A10-5-5 5 10/3/2013 Investigation Eastern Area A-10 Subsurface	A10-5-INT 16 10/3/2013 Investigation Eastern Area A-10 Subsurface	A10-6-10 10 12/18/2013 Investigation Eastern Area A-10 Subsurface	A10-6-15 15 12/18/2013 Investigation Eastern Area A-10 Subsurface	A10-6-2 2 12/18/2013 Investigation Eastern Area A-10 Surface	A10-6-20 20 12/18/2013 Investigation Eastern Area A-10 Subsurface
Herbicides/Pesticides (mg/kg)							
2,4,5-T	93765	NA	NA	NA	NA	NA	NA
2,4-D	94757	NA	NA	NA	NA	NA	NA
2,4-Db	94826	NA	NA	NA	NA	NA	NA
4,4'-DDD	72548	NA	NA	NA	NA	NA	NA
4,4'-DDE	72559	NA	NA	NA	NA	NA	NA
4,4'-DDT	50293	NA	NA	NA	NA	NA	NA
Aldrin	309002	NA	NA	NA	NA	NA	NA
Alpha-BHC	319846	NA	NA	NA	NA	NA	NA
Beta-BHC	319857	NA	NA	NA	NA	NA	NA
Delta-BHC	319868	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	5103719	NA	NA	NA	NA	NA	NA
Dalapon	75990	NA	NA	NA	NA	NA	NA
Dicamba	1918009	NA	NA	NA	NA	NA	NA
Dichoroprop	120365	NA	NA	NA	NA	NA	NA
Dieldrin	60571	NA	NA	NA	NA	NA	NA
Dinoseb	88857	NA	NA	NA	NA	NA	NA
Endosulfan I	959988	NA	NA	NA	NA	NA	NA
Endosulfan II	33213659	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	1031078	NA	NA	NA	NA	NA	NA
Endrin	72208	NA	NA	NA	NA	NA	NA
Endrin aldehyde	7421934	NA	NA	NA	NA	NA	NA
Endrin ketone	53494705	NA	NA	NA	NA	NA	NA
Gamma-BHC	58899	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	5103742	NA	NA	NA	NA	NA	NA
Heptachlor	76448	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024573	NA	NA	NA	NA	NA	NA
Mcpa	94746	NA	NA	NA	NA	NA	NA
Mcpp	93652	NA	NA	NA	NA	NA	NA
Methoxychlor	72435	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Silvex (2,4,5-TP)	93721	NA	NA	NA	NA	NA	NA
Toxaphene	8001352	NA	NA	NA	NA	NA	NA
Total Metals (mg/kg)							
Aluminum	7429905	NA	NA	NA	NA	NA	NA
Antimony	7440360	NA	NA	NA	NA	NA	NA
Arsenic	7440382	5	3.9	1.7	NA	NA	NA
Barium	7440393	190	121	163	NA	NA	NA
Beryllium	7440417	NA	NA	NA	NA	NA	NA
Boron	7440428	NA	NA	NA	NA	NA	NA
Cadmium	7440439	< 0.36	< 0.45	< 0.19	NA	NA	NA
Calcium	7440702	NA	NA	NA	NA	NA	NA
Chromium	7440473	13.3	17.1	1.5	NA	NA	NA
Cobalt	7440484	NA	NA	NA	NA	NA	NA

Risk-Based Remedies
RBR Consulting, Inc.

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-5-2	A10-5-5	A10-5-INT	A10-6-10	A10-6-15	A10-6-2	A10-6-20
Sample Depth	2	5	16	10	15	2	20
Date Collected	10/3/2013	10/3/2013	10/3/2013	12/18/2013	12/18/2013	12/18/2013	12/18/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Surface	Subsurface	Subsurface	Subsurface	Subsurface	Surface	Subsurface
Constituent	CAS No.						
Total Metals (mg/kg) (continued)							
Copper	7440508	NA	NA	NA	NA	NA	NA
Iron	7439896	NA	NA	NA	NA	NA	NA
Lead	7439921	14.9	13.9	3.5	7.7	2.8	2.2
Lithium	7439932	NA	NA	NA	NA	NA	NA
Manganese	7439965	NA	NA	NA	NA	NA	NA
Magnesium	7439954	NA	NA	NA	NA	NA	NA
Mercury	7439976	< 0.045	< 0.045	< 0.04	NA	NA	NA
Molybdenum	7439987	NA	NA	NA	NA	NA	NA
Nickel	7440020	NA	NA	NA	NA	NA	NA
Potassium	7440097	NA	NA	NA	NA	NA	NA
Selenium	7782492	< 1.8	< 2.2	< 0.97	NA	NA	NA
Silver	7440224	< 0.91	< 1.1	< 0.48	NA	NA	NA
Sodium	7440235	NA	NA	NA	NA	NA	NA
Strontium	7440246	NA	NA	NA	NA	NA	NA
Thallium	7440280	NA	NA	NA	NA	NA	NA
Tin	7440315	NA	NA	NA	NA	NA	NA
Titanium	7440326	NA	NA	NA	NA	NA	NA
Vanadium	7440622	NA	NA	NA	NA	NA	NA
Zinc	7440666	NA	NA	NA	NA	NA	NA
Other Parameters							
PH	PH	NA	NA	NA	NA	NA	NA
Total Organic Carbon	1012	NA	NA	NA	NA	NA	NA

Notes:
 NA - Not Analyzed.
 J - Estimated value.
 R- Rejected value.

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC - Wichita, Kansas

Constituent	Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-6-5 5 12/18/2013 Investigation Eastern Area A-10 Subsurface	A10-7-10 10 12/18/2013 Investigation Eastern Area A-10 Subsurface	A10-7-15 15 12/18/2013 Investigation Eastern Area A-10 Subsurface	A10-7-2 2 12/18/2013 Investigation Eastern Area A-10 Surface	A10-7-20 20 10/2/2013 Investigation Eastern Area A-10 Subsurface	A10-7-5 5 12/18/2013 Investigation Eastern Area A-10 Subsurface	A10-8-5 5 12/18/2013 Investigation Eastern Area A-10 Subsurface
Volatile Organics (mg/kg)								
1,1,1,2-Tetrachloroethane	630206	NA	< 0.0031	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	71556	NA	0.0052	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	79345	NA	< 0.0031	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	79005	NA	< 0.0031	NA	NA	NA	NA	NA
1,1-Dichloroethane	75343	NA	0.0098	NA	NA	NA	NA	NA
1,1-Dichloroethene	75354	NA	< 0.0031	NA	NA	NA	NA	NA
1,1-Dichloropropene	563586	NA	< 0.0031	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	87616	NA	< 0.0031	NA	NA	NA	NA	NA
1,2,3-Trichloropropane	96184	NA	< 0.0031	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	120821	NA	< 0.0031	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	95636	NA	< 0.0031	NA	NA	NA	NA	NA
1,2-Dibromoethane	106934	NA	< 0.0031	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95501	NA	< 0.0031	NA	NA	NA	NA	NA
1,2-Dichloroethane	107062	NA	< 0.0031	NA	NA	NA	NA	NA
1,2-Dichloroethene, Total	540590	NA	< 0.0031	NA	NA	NA	NA	NA
1,2-Dichloropropane	78875	NA	< 0.0031	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	108678	NA	< 0.0031	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541731	NA	< 0.0031	NA	NA	NA	NA	NA
1,3-Dichloropropane	142289	NA	< 0.0031	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106467	NA	< 0.0031	NA	NA	NA	NA	NA
1,4-Dioxane	123911	NA	NA	NA	NA	NA	NA	NA
2,2-Dichloropropane	594207	NA	< 0.0031	NA	NA	NA	NA	NA
2-Butanone	78933	NA	< 0.0062	NA	NA	NA	NA	NA
2-Chloroethyl Vinyl Ether	110758	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	95498	NA	< 0.0031	NA	NA	NA	NA	NA
2-Hexanone (methyl butyl ketone)	591786	NA	< 0.0125	NA	NA	NA	NA	NA
3-Chloro-1,2-Dibromopropane	96128	NA	< 0.0062	NA	NA	NA	NA	NA
4-Chlorotoluene	106434	NA	< 0.0031	NA	NA	NA	NA	NA
4-Isopropyltoluene	99876	NA	< 0.0031	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	108101	NA	< 0.0062	NA	NA	NA	NA	NA
Acetone	67641	NA	< 0.0125	NA	NA	NA	NA	NA
Acrolein	107028	NA	NA	NA	NA	NA	NA	NA
Acrylonitrile	107131	NA	NA	NA	NA	NA	NA	NA
Benzene	71432	NA	< 0.0031	NA	NA	NA	NA	NA
Bromobenzene	108861	NA	< 0.0031	NA	NA	NA	NA	NA
Bromochloromethane	74975	NA	< 0.0031	NA	NA	NA	NA	NA
Bromodichloromethane	75274	NA	< 0.0031	NA	NA	NA	NA	NA
Bromoform	75252	NA	< 0.0031	NA	NA	NA	NA	NA
Bromomethane	74839	NA	< 0.0031	NA	NA	NA	NA	NA
Carbon Disulfide	75150	NA	< 0.0031	NA	NA	NA	NA	NA
Carbon Tetrachloride	56235	NA	< 0.0031	NA	NA	NA	NA	NA
Chlorobenzene	108907	NA	< 0.0031	NA	NA	NA	NA	NA
Dibromochloromethane	124481	NA	< 0.0031	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-6-5	A10-7-10	A10-7-15	A10-7-2	A10-7-20	A10-7-5	A10-8-5
Sample Depth	5	10	15	2	20	5	5
Date Collected	12/18/2013	12/18/2013	12/18/2013	12/18/2013	10/2/2013	12/18/2013	12/18/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Subsurface
CAS No.							
Constituent							
Semi-Volatile Organics (mg/kg)							
1,2,4-Trichlorobenzene	120821	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95501	NA	NA	NA	NA	NA	NA
1,2-Diphenylhydrazine	122667	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541731	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106467	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene	90120	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	95954	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	88062	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	120832	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	105679	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	51285	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	121142	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	606202	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	91587	NA	NA	NA	NA	NA	NA
2-Chlorophenol	95578	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	91576	NA	NA	NA	NA	NA	NA
2-Methylphenol	95487	NA	NA	NA	NA	NA	NA
2-Nitroaniline	88744	NA	NA	NA	NA	NA	NA
2-Nitrophenol	88755	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	91941	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99092	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-Methylphenol	534521	NA	NA	NA	NA	NA	NA
4-Bromophenyl Phenyl Ether	101553	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	59507	NA	NA	NA	NA	NA	NA
4-Chloroaniline	106478	NA	NA	NA	NA	NA	NA
4-Chlorophenyl Phenyl Ether	7005723	NA	NA	NA	NA	NA	NA
4-Nitroaniline	100016	NA	NA	NA	NA	NA	NA
4-Nitrophenol	100027	NA	NA	NA	NA	NA	NA
Acenaphthene	83329	NA	NA	NA	NA	NA	NA
Acenaphthylene	208968	NA	NA	NA	NA	NA	NA
Aniline	62533	NA	NA	NA	NA	NA	NA
Anthracene	120127	NA	NA	NA	NA	NA	NA
Benzidine	92875	NA	NA	NA	NA	NA	NA
Benzo(A)Anthracene	56553	NA	NA	NA	NA	NA	NA
Benzo(A)Pyrene	50328	NA	NA	NA	NA	NA	NA
Benzo(B)Fluoranthene	205992	NA	NA	NA	NA	NA	NA
Benzo(G,H,I)Perylene	191242	NA	NA	NA	NA	NA	NA
Benzo(K)Fluoranthene	207089	NA	NA	NA	NA	NA	NA
Benzoic Acid	65850	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	100516	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethoxy)Methane	111911	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethyl)Ether	111444	NA	NA	NA	NA	NA	NA
Bis(2-Chloroisopropyl)Ether	108601	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-6-5	A10-7-10	A10-7-15	A10-7-2	A10-7-20	A10-7-5	A10-8-5
Sample Depth	5	10	15	2	20	5	5
Date Collected	12/18/2013	12/18/2013	12/18/2013	12/18/2013	10/2/2013	12/18/2013	12/18/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Subsurface
Constituent	CAS No.						
Semi-Volatile Organics (mg/kg) (continued)							
Bis(2-Ethylhexyl) Phthalate	117817	NA	NA	NA	NA	NA	NA
Butyl Benzyl Phthalate	85687	NA	NA	NA	NA	NA	NA
Carbazole	86748	NA	NA	NA	NA	NA	NA
Chrysene	218019	NA	NA	NA	NA	NA	NA
Dibenz(A,H)Anthracene	53703	NA	NA	NA	NA	NA	NA
Dibenzofuran	132649	NA	NA	NA	NA	NA	NA
Diethyl Phthalate	84662	NA	NA	NA	NA	NA	NA
Dimethyl Phthalate	131113	NA	NA	NA	NA	NA	NA
Di-N-Butyl Phthalate	84742	NA	NA	NA	NA	NA	NA
Di-N-Octyl Phthalate	117840	NA	NA	NA	NA	NA	NA
Fluoranthene	206440	NA	NA	NA	NA	NA	NA
Fluorene	86737	NA	NA	NA	NA	NA	NA
Hexachloro-1,3-Cyclopentadiene	77474	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	118741	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	87683	NA	NA	NA	NA	NA	NA
Hexachloroethane	67721	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-Cd)Pyrene	193395	NA	NA	NA	NA	NA	NA
Isophorone	78591	NA	NA	NA	NA	NA	NA
M-,P-Cresol Mixture	15831104	NA	NA	NA	NA	NA	NA
Naphthalene	91203	NA	NA	NA	NA	NA	NA
Nitrobenzene	98953	NA	NA	NA	NA	NA	NA
N-Nitrosodimethylamine	62759	NA	NA	NA	NA	NA	NA
N-Nitrosodi-N-Propylamine	621647	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	86306	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Phenanthrene	85018	NA	NA	NA	NA	NA	NA
Phenol	108952	NA	NA	NA	NA	NA	NA
Pyrene	129000	NA	NA	NA	NA	NA	NA
Pyridine	110861	NA	NA	NA	NA	NA	NA
PCBs (mg/kg)							
Pcb- 1016	12674112	NA	NA	NA	NA	NA	NA
Pcb- 1221	11104282	NA	NA	NA	NA	NA	NA
Pcb- 1232	11141165	NA	NA	NA	NA	NA	NA
Pcb- 1242	53469219	NA	NA	NA	NA	NA	NA
Pcb- 1248	12672296	NA	NA	NA	NA	NA	NA
Pcb- 1254	11097691	NA	NA	NA	NA	NA	NA
Pcb- 1260	11096825	NA	NA	NA	NA	NA	NA
Total Petroleum Hydrocarbons (TPH) (mg/kg)							
DRO (C10-C28) Range	DRO	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-6-5	A10-7-10	A10-7-15	A10-7-2	A10-7-20	A10-7-5	A10-8-5
Sample Depth	5	10	15	2	20	5	5
Date Collected	12/18/2013	12/18/2013	12/18/2013	12/18/2013	10/2/2013	12/18/2013	12/18/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Subsurface
CAS No.							
Constituent							
Herbicides/Pesticides (mg/kg)							
2,4,5-T	93765	NA	NA	NA	NA	NA	NA
2,4-D	94757	NA	NA	NA	NA	NA	NA
2,4-Db	94826	NA	NA	NA	NA	NA	NA
4,4'-DDD	72548	NA	NA	NA	NA	NA	NA
4,4'-DDE	72559	NA	NA	NA	NA	NA	NA
4,4'-DDT	50293	NA	NA	NA	NA	NA	NA
Aldrin	309002	NA	NA	NA	NA	NA	NA
Alpha-BHC	319846	NA	NA	NA	NA	NA	NA
Beta-BHC	319857	NA	NA	NA	NA	NA	NA
Delta-BHC	319868	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	5103719	NA	NA	NA	NA	NA	NA
Dalapon	75990	NA	NA	NA	NA	NA	NA
Dicamba	1918009	NA	NA	NA	NA	NA	NA
Dichoroprop	120365	NA	NA	NA	NA	NA	NA
Dieldrin	60571	NA	NA	NA	NA	NA	NA
Dinoseb	88857	NA	NA	NA	NA	NA	NA
Endosulfan I	959988	NA	NA	NA	NA	NA	NA
Endosulfan II	33213659	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	1031078	NA	NA	NA	NA	NA	NA
Endrin	72208	NA	NA	NA	NA	NA	NA
Endrin aldehyde	7421934	NA	NA	NA	NA	NA	NA
Endrin ketone	53494705	NA	NA	NA	NA	NA	NA
Gamma-BHC	58899	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	5103742	NA	NA	NA	NA	NA	NA
Heptachlor	76448	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024573	NA	NA	NA	NA	NA	NA
Mcpa	94746	NA	NA	NA	NA	NA	NA
Mcpp	93652	NA	NA	NA	NA	NA	NA
Methoxychlor	72435	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Silvex (2,4,5-TP)	93721	NA	NA	NA	NA	NA	NA
Toxaphene	8001352	NA	NA	NA	NA	NA	NA
Total Metals (mg/kg)							
Aluminum	7429905	NA	NA	NA	NA	NA	NA
Antimony	7440360	NA	NA	NA	NA	NA	NA
Arsenic	7440382	NA	NA	NA	NA	NA	NA
Barium	7440393	NA	NA	NA	NA	NA	NA
Beryllium	7440417	NA	NA	NA	NA	NA	NA
Boron	7440428	NA	NA	NA	NA	NA	NA
Cadmium	7440439	NA	NA	NA	NA	NA	NA
Calcium	7440702	NA	NA	NA	NA	NA	NA
Chromium	7440473	NA	NA	NA	NA	NA	NA
Cobalt	7440484	NA	NA	NA	NA	NA	NA

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Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-6-5	A10-7-10	A10-7-15	A10-7-2	A10-7-20	A10-7-5	A10-8-5
Sample Depth	5	10	15	2	20	5	5
Date Collected	12/18/2013	12/18/2013	12/18/2013	12/18/2013	10/2/2013	12/18/2013	12/18/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10						
Surface/subsurface	Subsurface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Subsurface
Constituent	CAS No.						
Total Metals (mg/kg) (continued)							
Copper	7440508	NA	NA	NA	NA	NA	NA
Iron	7439896	NA	NA	NA	NA	NA	NA
Lead	7439921	13.8	6.8	2.7	13.2	24.799999	NA
Lithium	7439932	NA	NA	NA	NA	NA	NA
Manganese	7439965	NA	NA	NA	NA	NA	NA
Magnesium	7439954	NA	NA	NA	NA	NA	NA
Mercury	7439976	NA	NA	NA	NA	NA	NA
Molybdenum	7439987	NA	NA	NA	NA	NA	NA
Nickel	7440020	NA	NA	NA	NA	NA	NA
Potassium	7440097	NA	NA	NA	NA	NA	NA
Selenium	7782492	NA	NA	NA	NA	NA	NA
Silver	7440224	NA	NA	NA	NA	NA	NA
Sodium	7440235	NA	NA	NA	NA	NA	NA
Strontium	7440246	NA	NA	NA	NA	NA	NA
Thallium	7440280	NA	NA	NA	NA	NA	NA
Tin	7440315	NA	NA	NA	NA	NA	NA
Titanium	7440326	NA	NA	NA	NA	NA	NA
Vanadium	7440622	NA	NA	NA	NA	NA	NA
Zinc	7440666	NA	NA	NA	NA	NA	NA
Other Parameters							
PH	PH	NA	NA	NA	NA	NA	NA
Total Organic Carbon	1012	NA	NA	NA	NA	NA	NA

Notes:
 NA - Not Analyzed.
 J - Estimated value.
 R - Rejected value.

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Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Constituent	Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-9-10 10 12/19/2013 Investigation Eastern Area A-10 Subsurface	A10-9-15 15 12/19/2013 Investigation Eastern Area A-10 Subsurface	A10-9-2 2 12/18/2013 Investigation Eastern Area A-10 Surface	A10-9-5 5 12/18/2013 Investigation Eastern Area A-10 Subsurface	A11-1-0.5 0.5 10/15/2013 Investigation Eastern Area A-11 Surface	A11-1-10 10 10/15/2013 Investigation Eastern Area A-11 Subsurface	A11-1-15 15 10/15/2013 Investigation Eastern Area A-11 Subsurface
Volatile Organics (mg/kg)								
1,1,1,2-Tetrachloroethane	630206	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
1,1,1-Trichloroethane	71556	NA	NA	NA	< 0.0046	< 0.0197	< 0.003	< 0.003
1,1,2,2-Tetrachloroethane	79345	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
1,1,2-Trichloroethane	79005	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
1,1-Dichloroethane	75343	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
1,1-Dichloroethene	75354	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
1,1-Dichloropropene	563586	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
1,2,3-Trichlorobenzene	87616	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
1,2,3-Trichloropropane	96184	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
1,2,4-Trichlorobenzene	120821	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
1,2,4-Trimethylbenzene	95636	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
1,2-Dibromoethane	106934	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
1,2-Dichlorobenzene	95501	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
1,2-Dichloroethane	107062	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
1,2-Dichloroethene, Total	540590	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
1,2-Dichloropropane	78875	NA	NA	NA	< 0.0046	NA	NA	NA
1,3,5-Trimethylbenzene	108678	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
1,3-Dichlorobenzene	541731	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
1,3-Dichloropropane	142289	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
1,4-Dichlorobenzene	106467	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
1,4-Dioxane	123911	NA	NA	NA	NA	< 0.13	< 0.12	< 0.12
2,2-Dichloropropane	594207	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
2-Butanone	78933	NA	NA	NA	< 0.0091	< 0.016	< 0.016	< 0.015
2-Chloroethyl Vinyl Ether	110758	NA	NA	NA	NA	< 0.016	< 0.016	< 0.015
2-Chlorotoluene	95498	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
2-Hexanone (methyl butyl ketone)	591786	NA	NA	NA	< 0.0182	< 0.016	< 0.016	< 0.015
3-Chloro-1,2-Dibromopropane	96128	NA	NA	NA	< 0.0091	NA	NA	NA
4-Chlorotoluene	106434	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
4-Isopropyltoluene	99876	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
4-Methyl-2-Pentanone	108101	NA	NA	NA	< 0.0091	< 0.016	< 0.016	< 0.015
Acetone	67641	NA	NA	NA	< 0.0182	< 0.032	< 0.031	< 0.03
Acrolein	107028	NA	NA	NA	NA	< 0.016	< 0.016	< 0.015
Acrylonitrile	107131	NA	NA	NA	NA	< 0.016	< 0.016	< 0.015
Benzene	71432	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Bromobenzene	108861	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Bromochloromethane	74975	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Bromodichloromethane	75274	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Bromoform	75252	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Bromomethane	74839	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Carbon Disulfide	75150	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Carbon Tetrachloride	56235	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Chlorobenzene	108907	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Dibromochloromethane	124481	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003

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Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-9-10 10 12/19/2013 Investigation Eastern Area A-10 Subsurface	A10-9-15 15 12/19/2013 Investigation Eastern Area A-10 Subsurface	A10-9-2 2 12/18/2013 Investigation Eastern Area A-10 Surface	A10-9-5 5 12/18/2013 Investigation Eastern Area A-10 Subsurface	A11-1-0.5 0.5 10/15/2013 Investigation Eastern Area A-11 Surface	A11-1-10 10 10/15/2013 Investigation Eastern Area A-11 Subsurface	A11-1-15 15 10/15/2013 Investigation Eastern Area A-11 Subsurface
Constituent							
Volatile Organics (mg/kg) (continued)							
Chloroethane 75003	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Chloroform 67663	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Chloromethane 74873	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Cis-1,2-Dichloroethene 156592	NA	NA	NA	< 0.0046	0.0021 J	< 0.0031	< 0.003
Cis-1,3-Dichloropropene 10061015	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Dibromomethane 74953	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Dichlorodifluoromethane 75718	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Ethylbenzene 100414	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Hexachlorobutadiene 87683	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Isopropylbenzene 98828	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
M,P-Xylenes 179601231	NA	NA	NA	NA	< 0.0065	< 0.0062	< 0.0061
Methyl Tert-Butyl Ether 1634044	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Methylene Chloride 75092	NA	NA	NA	< 0.0046	< 0.0065	< 0.0062	< 0.0061
Naphthalene 91203	NA	NA	NA	< 0.0091	< 0.0032	< 0.0031	< 0.003
N-Butylbenzene 104518	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
N-Propylbenzene 103651	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
O-Xylene 95476	NA	NA	NA	NA	< 0.0032	< 0.0031	< 0.003
Sec-Butylbenzene 135988	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Styrene 100425	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Tert-Butylbenzene 98066	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Tetrachloroethene 127184	NA	NA	NA	0.0325	0.0456	0.0167	< 0.003
Toluene 108883	NA	NA	NA	< 0.0046	0.0017 J	< 0.0031	< 0.003
Total Xylenes 1330207	NA	NA	NA	< 0.0046	< 0.0065	< 0.0062	< 0.0061
Trans-1,2-Dichloroethene 156605	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Trans-1,3-Dichloropropene 10061026	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Trichloroethene 79016	NA	NA	NA	< 0.0046	0.0549	0.0053	< 0.003
Trichlorofluoromethane 75694	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
Vinyl Acetate 108054	NA	NA	NA	< 0.0046	< 0.016	< 0.016	< 0.015
Vinyl Chloride 75014	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	0.0067
Dibromochloropropane (DBCP) 67708832	NA	NA	NA	< 0.0046	< 0.0032	< 0.0031	< 0.003
VOCs - Method 3810 Mod							
Benzene 71432	< 0.0084 J	< 0.0084 J	< 0.0084 J	< 0.0084 J	NA	NA	NA
Cis-1,2-Dichloroethene 156592	< 0.0084 J	< 0.0084 J	< 0.0084 J	< 0.0084 J	NA	NA	NA
Ethylbenzene 100414	< 0.0084 J	< 0.0084 J	< 0.0084 J	< 0.0084 J	NA	NA	NA
Tetrachloroethene 127184	0.0207 J	0.0432 J	0.338 J	0.293 J	NA	NA	NA
Toluene 108883	< 0.0084 J	< 0.0084 J	< 0.0084 J	< 0.0084 J	NA	NA	NA
Trichloroethene 79016	< 0.0084 J	< 0.0084 J	< 0.0084 J	< 0.0084 J	NA	NA	NA
Total Xylenes 1330207	< 0.0084 J	< 0.0084 J	< 0.0084 J	< 0.0084 J	NA	NA	NA

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Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Constituent	Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-9-10 10 12/19/2013 Investigation Eastern Area A-10 Subsurface	A10-9-15 15 12/19/2013 Investigation Eastern Area A-10 Subsurface	A10-9-2 2 12/18/2013 Investigation Eastern Area A-10 Surface	A10-9-5 5 12/18/2013 Investigation Eastern Area A-10 Subsurface	A11-1-0.5 0.5 10/15/2013 Investigation Eastern Area A-11 Surface	A11-1-10 10 10/15/2013 Investigation Eastern Area A-11 Subsurface	A11-1-15 15 10/15/2013 Investigation Eastern Area A-11 Subsurface
Semi-Volatile Organics (mg/kg)								
1,2,4-Trichlorobenzene	120821	NA	NA	NA	NA	< 0.22	NA	NA
1,2-Dichlorobenzene	95501	NA	NA	NA	NA	< 0.22	NA	NA
1,2-Diphenylhydrazine	122667	NA	NA	NA	NA	< 0.22	NA	NA
1,3-Dichlorobenzene	541731	NA	NA	NA	NA	< 0.22	NA	NA
1,4-Dichlorobenzene	106467	NA	NA	NA	NA	< 0.22	NA	NA
1-Methylnaphthalene	90120	NA	NA	NA	NA	< 0.22	NA	NA
2,4,5-Trichlorophenol	95954	NA	NA	NA	NA	< 0.22	NA	NA
2,4,6-Trichlorophenol	88062	NA	NA	NA	NA	< 0.22	NA	NA
2,4-Dichlorophenol	120832	NA	NA	NA	NA	< 0.22	NA	NA
2,4-Dimethylphenol	105679	NA	NA	NA	NA	< 0.22	NA	NA
2,4-Dinitrophenol	51285	NA	NA	NA	NA	< 1.1	NA	NA
2,4-Dinitrotoluene	121142	NA	NA	NA	NA	< 0.22	NA	NA
2,6-Dinitrotoluene	606202	NA	NA	NA	NA	< 0.22	NA	NA
2-Chloronaphthalene	91587	NA	NA	NA	NA	< 0.22	NA	NA
2-Chlorophenol	95578	NA	NA	NA	NA	< 0.22	NA	NA
2-Methylnaphthalene	91576	NA	NA	NA	NA	< 0.22	NA	NA
2-Methylphenol	95487	NA	NA	NA	NA	< 0.22	NA	NA
2-Nitroaniline	88744	NA	NA	NA	NA	< 0.22	NA	NA
2-Nitrophenol	88755	NA	NA	NA	NA	< 0.22	NA	NA
3,3'-Dichlorobenzidine	91941	NA	NA	NA	NA	< 0.22	NA	NA
3-Nitroaniline	99092	NA	NA	NA	NA	< 0.22	NA	NA
4,6-Dinitro-2-Methylphenol	534521	NA	NA	NA	NA	< 0.43	NA	NA
4-Bromophenyl Phenyl Ether	101553	NA	NA	NA	NA	< 0.22	NA	NA
4-Chloro-3-Methylphenol	59507	NA	NA	NA	NA	< 0.22	NA	NA
4-Chloroaniline	106478	NA	NA	NA	NA	< 0.22	NA	NA
4-Chlorophenyl Phenyl Ether	7005723	NA	NA	NA	NA	< 0.22	NA	NA
4-Nitroaniline	100016	NA	NA	NA	NA	< 0.22	NA	NA
4-Nitrophenol	100027	NA	NA	NA	NA	< 1.1	NA	NA
Acenaphthene	83329	NA	NA	NA	NA	< 0.22	NA	NA
Acenaphthylene	208968	NA	NA	NA	NA	< 0.22	NA	NA
Aniline	62533	NA	NA	NA	NA	< 0.22	NA	NA
Anthracene	120127	NA	NA	NA	NA	< 0.22	NA	NA
Benzidine	92875	NA	NA	NA	NA	< 2.2	NA	NA
Benzo(A)Anthracene	56553	NA	NA	NA	NA	0.0288	J	NA
Benzo(A)Pyrene	50328	NA	NA	NA	NA	< 0.22	NA	NA
Benzo(B)Fluoranthene	205992	NA	NA	NA	NA	0.0501	J	NA
Benzo(G,H,I)Perylene	191242	NA	NA	NA	NA	0.0411	J	NA
Benzo(K)Fluoranthene	207089	NA	NA	NA	NA	< 0.22	NA	NA
Benzoic Acid	65850	NA	NA	NA	NA	< 1.1	NA	NA
Benzyl Alcohol	100516	NA	NA	NA	NA	< 0.22	NA	NA
Bis(2-Chloroethoxy)Methane	111911	NA	NA	NA	NA	< 0.22	NA	NA
Bis(2-Chloroethyl)Ether	111444	NA	NA	NA	NA	< 0.22	NA	NA
Bis(2-Chloroisopropyl)Ether	108601	NA	NA	NA	NA	< 0.22	NA	NA

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Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A10-9-10 10 12/19/2013 Investigation Eastern Area A-10 Subsurface	A10-9-15 15 12/19/2013 Investigation Eastern Area A-10 Subsurface	A10-9-2 2 12/18/2013 Investigation Eastern Area A-10 Surface	A10-9-5 5 12/18/2013 Investigation Eastern Area A-10 Subsurface	A11-1-0.5 0.5 10/15/2013 Investigation Eastern Area A-11 Surface	A11-1-10 10 10/15/2013 Investigation Eastern Area A-11 Subsurface	A11-1-15 15 10/15/2013 Investigation Eastern Area A-11 Subsurface
Semi-Volatile Organics (mg/kg) (continued)							
Bis(2-Ethylhexyl) Phthalate	117817	NA	NA	NA	0.612	NA	NA
Butyl Benzyl Phthalate	85687	NA	NA	NA	0.901	NA	NA
Carbazole	86748	NA	NA	NA	< 0.22	NA	NA
Chrysene	218019	NA	NA	NA	0.03	J	NA
Dibenz(A,H)Anthracene	53703	NA	NA	NA	< 0.22	NA	NA
Dibenzofuran	132649	NA	NA	NA	< 0.22	NA	NA
Diethyl Phthalate	84662	NA	NA	NA	< 0.43	NA	NA
Dimethyl Phthalate	131113	NA	NA	NA	< 0.22	NA	NA
Di-N-Butyl Phthalate	84742	NA	NA	NA	< 0.43	NA	NA
Di-N-Octyl Phthalate	117840	NA	NA	NA	< 0.22	NA	NA
Fluoranthene	206440	NA	NA	NA	0.0419	J	NA
Fluorene	86737	NA	NA	NA	< 0.22	NA	NA
Hexachloro-1,3-Cyclopentadiene	77474	NA	NA	NA	< 0.22	NA	NA
Hexachlorobenzene	118741	NA	NA	NA	< 0.22	NA	NA
Hexachlorobutadiene	87683	NA	NA	NA	< 0.22	NA	NA
Hexachloroethane	67721	NA	NA	NA	< 0.22	NA	NA
Indeno(1,2,3-Cd)Pyrene	193395	NA	NA	NA	0.0437	J	NA
Isophorone	78591	NA	NA	NA	< 0.22	NA	NA
M-,P-Cresol Mixture	15831104	NA	NA	NA	< 0.22	NA	NA
Naphthalene	91203	NA	NA	NA	0.025	J	NA
Nitrobenzene	98953	NA	NA	NA	< 0.22	NA	NA
N-Nitrosodimethylamine	62759	NA	NA	NA	< 0.43	NA	NA
N-Nitrosodi-N-Propylamine	621647	NA	NA	NA	< 0.22	NA	NA
N-Nitrosodiphenylamine	86306	NA	NA	NA	< 0.22	NA	NA
Pentachlorophenol	87865	NA	NA	NA	< 1.1	NA	NA
Phenanthrene	85018	NA	NA	NA	0.0314	J	NA
Phenol	108952	NA	NA	NA	< 0.22	NA	NA
Pyrene	129000	NA	NA	NA	0.0361	J	NA
Pyridine	110861	NA	NA	NA	< 0.43	NA	NA
PCBs (mg/kg)							
Pcb- 1016	12674112	NA	NA	NA	NA	NA	NA
Pcb- 1221	11104282	NA	NA	NA	NA	NA	NA
Pcb- 1232	11141165	NA	NA	NA	NA	NA	NA
Pcb- 1242	53469219	NA	NA	NA	NA	NA	NA
Pcb- 1248	12672296	NA	NA	NA	NA	NA	NA
Pcb- 1254	11097691	NA	NA	NA	NA	NA	NA
Pcb- 1260	11096825	NA	NA	NA	NA	NA	NA
Total Petroleum Hydrocarbons (TPH) (mg/kg)							
DRO (C10-C28) Range	DRO	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-9-10	A10-9-15	A10-9-2	A10-9-5	A11-1-0.5	A11-1-10	A11-1-15
Sample Depth	10	15	2	5	0.5	10	15
Date Collected	12/19/2013	12/19/2013	12/18/2013	12/18/2013	10/15/2013	10/15/2013	10/15/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10	Area A-10	Area A-10	Area A-10	Area A-11	Area A-11	Area A-11
Surface/subsurface	Subsurface	Subsurface	Surface	Subsurface	Surface	Subsurface	Subsurface
CAS No.							
Herbicides/Pesticides (mg/kg)							
2,4,5-T	93765	NA	NA	NA	NA	NA	NA
2,4-D	94757	NA	NA	NA	NA	NA	NA
2,4-Db	94826	NA	NA	NA	NA	NA	NA
4,4'-DDD	72548	NA	NA	NA	NA	NA	NA
4,4'-DDE	72559	NA	NA	NA	NA	NA	NA
4,4'-DDT	50293	NA	NA	NA	NA	NA	NA
Aldrin	309002	NA	NA	NA	NA	NA	NA
Alpha-BHC	319846	NA	NA	NA	NA	NA	NA
Beta-BHC	319857	NA	NA	NA	NA	NA	NA
Delta-BHC	319868	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	5103719	NA	NA	NA	NA	NA	NA
Dalapon	75990	NA	NA	NA	NA	NA	NA
Dicamba	1918009	NA	NA	NA	NA	NA	NA
Dichoroprop	120365	NA	NA	NA	NA	NA	NA
Dieldrin	60571	NA	NA	NA	NA	NA	NA
Dinoseb	88857	NA	NA	NA	NA	NA	NA
Endosulfan I	959988	NA	NA	NA	NA	NA	NA
Endosulfan II	33213659	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	1031078	NA	NA	NA	NA	NA	NA
Endrin	72208	NA	NA	NA	NA	NA	NA
Endrin aldehyde	7421934	NA	NA	NA	NA	NA	NA
Endrin ketone	53494705	NA	NA	NA	NA	NA	NA
Gamma-BHC	58899	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	5103742	NA	NA	NA	NA	NA	NA
Heptachlor	76448	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024573	NA	NA	NA	NA	NA	NA
Mcpa	94746	NA	NA	NA	NA	NA	NA
Mcpp	93652	NA	NA	NA	NA	NA	NA
Methoxychlor	72435	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Silvex (2,4,5-TP)	93721	NA	NA	NA	NA	NA	NA
Toxaphene	8001352	NA	NA	NA	NA	NA	NA
Total Metals (mg/kg)							
Aluminum	7429905	NA	NA	NA	NA	NA	NA
Antimony	7440360	NA	NA	NA	NA	NA	NA
Arsenic	7440382	NA	NA	NA	NA	4	NA
Barium	7440393	NA	NA	NA	NA	136	NA
Beryllium	7440417	NA	NA	NA	NA	NA	NA
Boron	7440428	NA	NA	NA	NA	0.92	NA
Cadmium	7440439	NA	NA	NA	NA	NA	NA
Calcium	7440702	NA	NA	NA	NA	NA	NA
Chromium	7440473	NA	NA	NA	NA	15.8	NA
Cobalt	7440484	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A10-9-10	A10-9-15	A10-9-2	A10-9-5	A11-1-0.5	A11-1-10	A11-1-15
Sample Depth	10	15	2	5	0.5	10	15
Date Collected	12/19/2013	12/19/2013	12/18/2013	12/18/2013	10/15/2013	10/15/2013	10/15/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-10	Area A-10	Area A-10	Area A-10	Area A-11	Area A-11	Area A-11
Surface/subsurface	Subsurface	Subsurface	Surface	Subsurface	Surface	Subsurface	Subsurface
Constituent	CAS No.						
Total Metals (mg/kg) (continued)							
Copper	7440508	NA	NA	NA	NA	NA	NA
Iron	7439896	NA	NA	NA	NA	NA	NA
Lead	7439921	NA	NA	NA	78.300003	NA	NA
Lithium	7439932	NA	NA	NA	NA	NA	NA
Manganese	7439965	NA	NA	NA	NA	NA	NA
Magnesium	7439954	NA	NA	NA	NA	NA	NA
Mercury	7439976	NA	NA	NA	0.11	NA	NA
Molybdenum	7439987	NA	NA	NA	NA	NA	NA
Nickel	7440020	NA	NA	NA	NA	NA	NA
Potassium	7440097	NA	NA	NA	NA	NA	NA
Selenium	7782492	NA	NA	NA	< 4.2	NA	NA
Silver	7440224	NA	NA	NA	< 2.1	NA	NA
Sodium	7440235	NA	NA	NA	NA	NA	NA
Strontium	7440246	NA	NA	NA	NA	NA	NA
Thallium	7440280	NA	NA	NA	NA	NA	NA
Tin	7440315	NA	NA	NA	NA	NA	NA
Titanium	7440326	NA	NA	NA	NA	NA	NA
Vanadium	7440622	NA	NA	NA	NA	NA	NA
Zinc	7440666	NA	NA	NA	NA	NA	NA
Other Parameters							
PH	PH	NA	NA	NA	NA	NA	NA
Total Organic Carbon	1012	NA	NA	NA	NA	NA	NA

Notes:

NA - Not Analyzed.

J - Estimated value.

R- Rejected value.

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A11-1-2 2 10/15/2013 Investigation Eastern Area A-11 Surface	A11-1-5 5 10/15/2013 Investigation Eastern Area A-11 Subsurface	A11-1-JNT 17 10/2/2013 Investigation Eastern Area A-11 Subsurface	A12-1-0.5 0.5 10/9/2013 Investigation Eastern Area A-12 Surface	A12-10-10 10 12/17/2013 Investigation Eastern Area A-12 Subsurface	A12-10-15 15 12/17/2013 Investigation Eastern Area A-12 Subsurface	A12-10-20 20 12/17/2013 Investigation Eastern Area A-12 Subsurface
Volatile Organics (mg/kg)							
1,1,1,2-Tetrachloroethane	630206 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
1,1,1-Trichloroethane	71556 0.0074	0.0089	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
1,1,2,2-Tetrachloroethane	79345 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
1,1,2-Trichloroethane	79005 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
1,1-Dichloroethane	75343 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
1,1-Dichloroethene	75354 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
1,1-Dichloropropene	563586 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
1,2,3-Trichlorobenzene	87616 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
1,2,3-Trichloropropane	96184 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
1,2,4-Trichlorobenzene	120821 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
1,2,4-Trimethylbenzene	95636 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
1,2-Dibromoethane	106934 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
1,2-Dichlorobenzene	95501 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
1,2-Dichloroethane	107062 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
1,2-Dichloroethene, Total	540590 NA	NA	NA	NA	< 0.0042	< 0.0051	< 0.0056
1,2-Dichloropropane	78875 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
1,3,5-Trimethylbenzene	108678 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
1,3-Dichlorobenzene	541731 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
1,3-Dichloropropane	142289 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
1,4-Dichlorobenzene	106467 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
1,4-Dioxane	123911 < 0.13	< 0.12	< 0.12	< 0.25	NA	NA	NA
2,2-Dichloropropane	594207 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
2-Butanone	78933 < 0.016	< 0.016	< 0.015	< 0.032	< 0.0084	< 0.0101	< 0.0111
2-Chloroethyl Vinyl Ether	110758 < 0.016	< 0.016	R < 0.015	R < 0.032	NA	NA	NA
2-Chlorotoluene	95498 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
2-Hexanone (methyl butyl ketone)	591786 < 0.016	< 0.016	< 0.015	< 0.032	< 0.0167	< 0.0203	< 0.0222
3-Chloro-1,2-Dibromopropane	96128 NA	NA	NA	NA	< 0.0084	< 0.0101	< 0.0111
4-Chlorotoluene	106434 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
4-Isopropyltoluene	99876 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
4-Methyl-2-Pentanone	108101 < 0.016	< 0.016	< 0.015	< 0.032	< 0.0084	< 0.0101	< 0.0111
Acetone	67641 < 0.032	< 0.031	< 0.03	0.0291	J	< 0.0203	< 0.0222
Acrolein	107028 < 0.016	< 0.016	< 0.015	< 0.032	NA	NA	NA
Acrylonitrile	107131 < 0.016	< 0.016	< 0.015	< 0.032	NA	NA	NA
Benzene	71432 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
Bromobenzene	108861 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
Bromochloromethane	74975 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
Bromodichloromethane	75274 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
Bromoform	75252 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
Bromomethane	74839 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
Carbon Disulfide	75150 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
Carbon Tetrachloride	56235 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
Chlorobenzene	108907 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056
Dibromochloromethane	124481 < 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0051	< 0.0056

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A11-1-2 2 10/15/2013 Investigation Eastern Area A-11 Surface	A11-1-5 5 10/15/2013 Investigation Eastern Area A-11 Subsurface	A11-1-INT 17 10/2/2013 Investigation Eastern Area A-11 Subsurface	A12-1-0.5 0.5 10/9/2013 Investigation Eastern Area A-12 Surface	A12-10-10 10 12/17/2013 Investigation Eastern Area A-12 Subsurface	A12-10-15 15 12/17/2013 Investigation Eastern Area A-12 Subsurface	A12-10-20 20 12/17/2013 Investigation Eastern Area A-12 Subsurface
Constituent							
Volatile Organics (mg/kg) (continued)							
Chloroethane	75003	< 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0056
Chloroform	67663	< 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0056
Chloromethane	74873	< 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0056
Cis-1,2-Dichloroethene	156592	< 0.0032	< 0.0031	< 0.003	0.0018 J	< 0.0042	< 0.0056
Cis-1,3-Dichloropropene	10061015	< 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0056
Dibromomethane	74953	< 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0056
Dichlorodifluoromethane	75718	< 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0056
Ethylbenzene	100414	< 0.0032	< 0.0031	< 0.003	0.0054 J	< 0.0042	< 0.0056
Hexachlorobutadiene	87683	< 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0056
Isopropylbenzene	98828	< 0.0032	< 0.0031	< 0.003	< 0.0063	0.0064	< 0.0056
M,P-Xylenes	179601231	< 0.0065	< 0.0062	< 0.0061	0.0149	NA	NA
Methyl Tert-Butyl Ether	1634044	< 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0056
Methylene Chloride	75092	< 0.0065	< 0.0062	< 0.0061	< 0.013	< 0.0042	< 0.0056
Naphthalene	91203	< 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0084	< 0.0111
N-Butylbenzene	104518	< 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0056
N-Propylbenzene	103651	< 0.0032	< 0.0031	< 0.003	< 0.0063	0.007	< 0.0056
O-Xylene	95476	< 0.0032	< 0.0031	< 0.003	0.004 J	NA	NA
Sec-Butylbenzene	135988	< 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0056
Styrene	100425	< 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0056
Tert-Butylbenzene	98066	< 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0056
Tetrachloroethene	127184	0.0211	0.0346	< 0.003	0.0143	< 0.0042	< 0.0056
Toluene	108883	< 0.0032	< 0.0031	< 0.003	0.0151	< 0.0042	< 0.0056
Total Xylenes	1330207	< 0.0065	< 0.0062	< 0.0061	0.0189	< 0.0042	< 0.0056
Trans-1,2-Dichloroethene	156605	< 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0056
Trans-1,3-Dichloropropene	10061026	< 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0056
Trichloroethene	79016	0.0206	0.0186	< 0.003	0.0042 J	< 0.0042	< 0.0056
Trichlorofluoromethane	75694	< 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0056
Vinyl Acetate	108054	< 0.016	< 0.016	< 0.015	< 0.032	NA	NA
Vinyl Chloride	75014	< 0.0032	< 0.0031	< 0.003	< 0.0063	< 0.0042	< 0.0056
Dibromochloropropane (DBCP)	67708832	< 0.0032	< 0.0031	< 0.003	< 0.0063	NA	NA
VOCs - Method 3810 Mod							
Benzene	71432	NA	NA	NA	NA	< 0.0084 J	< 0.0084 J
Cis-1,2-Dichloroethene	156592	NA	NA	NA	NA	< 0.0084 J	< 0.0084 J
Ethylbenzene	100414	NA	NA	NA	NA	< 0.0084 J	< 0.0084 J
Tetrachloroethene	127184	NA	NA	NA	NA	< 0.0084 J	< 0.0084 J
Toluene	108883	NA	NA	NA	NA	< 0.0084 J	< 0.0084 J
Trichloroethene	79016	NA	NA	NA	NA	< 0.0084 J	< 0.0084 J
Total Xylenes	1330207	NA	NA	NA	NA	< 0.0084 J	< 0.0084 J

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A11-1-2 2 10/15/2013 Investigation Eastern Area A-11 Surface	A11-1-5 5 10/15/2013 Investigation Eastern Area A-11 Subsurface	A11-1-INT 17 10/2/2013 Investigation Eastern Area A-11 Subsurface	A12-1-0.5 0.5 10/9/2013 Investigation Eastern Area A-12 Surface	A12-10-10 10 12/17/2013 Investigation Eastern Area A-12 Subsurface	A12-10-15 15 12/17/2013 Investigation Eastern Area A-12 Subsurface	A12-10-20 20 12/17/2013 Investigation Eastern Area A-12 Subsurface
Semi-Volatile Organics (mg/kg)							
1,2,4-Trichlorobenzene	120821	< 0.2	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95501	< 0.2	NA	NA	NA	NA	NA
1,2-Diphenylhydrazine	122667	< 0.2	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541731	< 0.2	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106467	< 0.2	NA	NA	NA	NA	NA
1-Methylnaphthalene	90120	< 0.2	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	95954	< 0.2	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	88062	< 0.2	NA	NA	NA	NA	NA
2,4-Dichlorophenol	120832	< 0.2	NA	NA	NA	NA	NA
2,4-Dimethylphenol	105679	< 0.2	NA	NA	NA	NA	NA
2,4-Dinitrophenol	51285	< 1	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	121142	< 0.2	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	606202	< 0.2	NA	NA	NA	NA	NA
2-Chloronaphthalene	91587	< 0.2	NA	NA	NA	NA	NA
2-Chlorophenol	95578	< 0.2	NA	NA	NA	NA	NA
2-Methylnaphthalene	91576	< 0.2	NA	NA	NA	NA	NA
2-Methylphenol	95487	< 0.2	NA	NA	NA	NA	NA
2-Nitroaniline	88744	< 0.2	NA	NA	NA	NA	NA
2-Nitrophenol	88755	< 0.2	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	91941	< 0.2	NA	NA	NA	NA	NA
3-Nitroaniline	99092	< 0.2	NA	NA	NA	NA	NA
4,6-Dinitro-2-Methylphenol	534521	< 0.4	NA	NA	NA	NA	NA
4-Bromophenyl Phenyl Ether	101553	< 0.2	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	59507	< 0.2	NA	NA	NA	NA	NA
4-Chloroaniline	106478	< 0.2	NA	NA	NA	NA	NA
4-Chlorophenyl Phenyl Ether	7005723	< 0.2	NA	NA	NA	NA	NA
4-Nitroaniline	100016	< 0.2	NA	NA	NA	NA	NA
4-Nitrophenol	100027	< 1	NA	NA	NA	NA	NA
Acenaphthene	83329	< 0.2	NA	NA	NA	NA	NA
Acenaphthylene	208968	< 0.2	NA	NA	NA	NA	NA
Aniline	62533	< 0.2	NA	NA	NA	NA	NA
Anthracene	120127	< 0.2	NA	NA	NA	NA	NA
Benzidine	92875	< 2	NA	NA	NA	NA	NA
Benzo(A)Anthracene	56553	< 0.2	NA	NA	NA	NA	NA
Benzo(A)Pyrene	50328	< 0.2	NA	NA	NA	NA	NA
Benzo(B)Fluoranthene	205992	< 0.2	NA	NA	NA	NA	NA
Benzo(G,H,I)Perylene	191242	< 0.2	NA	NA	NA	NA	NA
Benzo(K)Fluoranthene	207089	< 0.2	NA	NA	NA	NA	NA
Benzoic Acid	65850	< 1	NA	NA	NA	NA	NA
Benzyl Alcohol	100516	< 0.2	NA	NA	NA	NA	NA
Bis(2-Chloroethoxy)Methane	111911	< 0.2	NA	NA	NA	NA	NA
Bis(2-Chloroethyl)Ether	111444	< 0.2	NA	NA	NA	NA	NA
Bis(2-Chloroisopropyl)Ether	108601	< 0.2	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A11-1-2	A11-1-5	A11-1-INT	A12-1-0.5	A12-10-10	A12-10-15	A12-10-20
Sample Depth	2	5	17	0.5	10	15	20
Date Collected	10/15/2013	10/15/2013	10/2/2013	10/9/2013	12/17/2013	12/17/2013	12/17/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-11	Area A-11	Area A-11	Area A-12	Area A-12	Area A-12	Area A-12
Surface/subsurface	Surface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Subsurface
Constituent	CAS No.						
Semi-Volatile Organics (mg/kg) (continued)							
Bis(2-Ethylhexyl) Phthalate	117817	< 0.4	NA	NA	NA	NA	NA
Butyl Benzyl Phthalate	85687	< 0.2	NA	NA	NA	NA	NA
Carbazole	86748	< 0.2	NA	NA	NA	NA	NA
Chrysene	218019	< 0.2	NA	NA	NA	NA	NA
Dibenz(A,H)Anthracene	53703	< 0.2	NA	NA	NA	NA	NA
Dibenzofuran	132649	< 0.2	NA	NA	NA	NA	NA
Diethyl Phthalate	84662	< 0.4	NA	NA	NA	NA	NA
Dimethyl Phthalate	131113	< 0.2	NA	NA	NA	NA	NA
Di-N-Butyl Phthalate	84742	< 0.4	NA	NA	NA	NA	NA
Di-N-Octyl Phthalate	117840	< 0.2	NA	NA	NA	NA	NA
Fluoranthene	206440	< 0.2	NA	NA	NA	NA	NA
Fluorene	86737	< 0.2	NA	NA	NA	NA	NA
Hexachloro-1,3-Cyclopentadiene	77474	< 0.2	NA	NA	NA	NA	NA
Hexachlorobenzene	118741	< 0.2	NA	NA	NA	NA	NA
Hexachlorobutadiene	87683	< 0.2	NA	NA	NA	NA	NA
Hexachloroethane	67721	< 0.2	NA	NA	NA	NA	NA
Indeno(1,2,3-Cd)Pyrene	193395	< 0.2	NA	NA	NA	NA	NA
Isophorone	78591	< 0.2	NA	NA	NA	NA	NA
M-,P-Cresol Mixture	15831104	< 0.2	NA	NA	NA	NA	NA
Naphthalene	91203	< 0.2	NA	NA	NA	NA	NA
Nitrobenzene	98953	< 0.2	NA	NA	NA	NA	NA
N-Nitrosodimethylamine	62759	< 0.4	NA	NA	NA	NA	NA
N-Nitrosodi-N-Propylamine	621647	< 0.2	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	86306	< 0.2	NA	NA	NA	NA	NA
Pentachlorophenol	87865	< 1	NA	NA	NA	NA	NA
Phenanthrene	85018	< 0.2	NA	NA	NA	NA	NA
Phenol	108952	< 0.2	NA	NA	NA	NA	NA
Pyrene	129000	< 0.2	NA	NA	NA	NA	NA
Pyridine	110861	< 0.4	NA	NA	NA	NA	NA
PCBs (mg/kg)							
Pcb- 1016	12674112	NA	NA	NA	NA	NA	NA
Pcb- 1221	11104282	NA	NA	NA	NA	NA	NA
Pcb- 1232	11141165	NA	NA	NA	NA	NA	NA
Pcb- 1242	53469219	NA	NA	NA	NA	NA	NA
Pcb- 1248	12672296	NA	NA	NA	NA	NA	NA
Pcb- 1254	11097691	NA	NA	NA	NA	NA	NA
Pcb- 1260	11096825	NA	NA	NA	NA	NA	NA
Total Petroleum Hydrocarbons (TPH) (mg/kg)							
DRO (C10-C28) Range	DRO	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A11-1-2	A11-1-5	A11-1-INT	A12-1-0.5	A12-10-10	A12-10-15	A12-10-20
Sample Depth	2	5	17	0.5	10	15	20
Date Collected	10/15/2013	10/15/2013	10/2/2013	10/9/2013	12/17/2013	12/17/2013	12/17/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-11	Area A-11	Area A-11	Area A-12	Area A-12	Area A-12	Area A-12
Surface/subsurface	Surface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Subsurface
CAS No.							
Herbicides/Pesticides (mg/kg)							
2,4,5-T	93765	NA	NA	NA	NA	NA	NA
2,4-D	94757	NA	NA	NA	NA	NA	NA
2,4-Db	94826	NA	NA	NA	NA	NA	NA
4,4'-DDD	72548	NA	NA	NA	NA	NA	NA
4,4'-DDE	72559	NA	NA	NA	NA	NA	NA
4,4'-DDT	50293	NA	NA	NA	NA	NA	NA
Aldrin	309002	NA	NA	NA	NA	NA	NA
Alpha-BHC	319846	NA	NA	NA	NA	NA	NA
Beta-BHC	319857	NA	NA	NA	NA	NA	NA
Delta-BHC	319868	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	5103719	NA	NA	NA	NA	NA	NA
Dalapon	75990	NA	NA	NA	NA	NA	NA
Dicamba	1918009	NA	NA	NA	NA	NA	NA
Dichoroprop	120365	NA	NA	NA	NA	NA	NA
Dieldrin	60571	NA	NA	NA	NA	NA	NA
Dinoseb	88857	NA	NA	NA	NA	NA	NA
Endosulfan I	959988	NA	NA	NA	NA	NA	NA
Endosulfan II	33213659	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	1031078	NA	NA	NA	NA	NA	NA
Endrin	72208	NA	NA	NA	NA	NA	NA
Endrin aldehyde	7421934	NA	NA	NA	NA	NA	NA
Endrin ketone	53494705	NA	NA	NA	NA	NA	NA
Gamma-BHC	58899	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	5103742	NA	NA	NA	NA	NA	NA
Heptachlor	76448	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024573	NA	NA	NA	NA	NA	NA
Mcpa	94746	NA	NA	NA	NA	NA	NA
Mcpp	93652	NA	NA	NA	NA	NA	NA
Methoxychlor	72435	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Silvex (2,4,5-TP)	93721	NA	NA	NA	NA	NA	NA
Toxaphene	8001352	NA	NA	NA	NA	NA	NA
Total Metals (mg/kg)							
Aluminum	7429905	NA	NA	NA	NA	NA	NA
Antimony	7440360	NA	NA	NA	NA	NA	NA
Arsenic	7440382	3.6	NA	NA	NA	NA	NA
Barium	7440393	90.400002	NA	NA	NA	NA	NA
Beryllium	7440417	NA	NA	NA	NA	NA	NA
Boron	7440428	NA	NA	NA	NA	NA	NA
Cadmium	7440439	< 0.75	NA	NA	NA	NA	NA
Calcium	7440702	NA	NA	NA	NA	NA	NA
Chromium	7440473	12.6	NA	NA	NA	NA	NA
Cobalt	7440484	NA	NA	NA	NA	NA	NA

Risk-Based Remedies
RBR Consulting, Inc.

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A11-1-2	A11-1-5	A11-1-INT	A12-1-0.5	A12-10-10	A12-10-15	A12-10-20
Sample Depth	2	5	17	0.5	10	15	20
Date Collected	10/15/2013	10/15/2013	10/2/2013	10/9/2013	12/17/2013	12/17/2013	12/17/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area A-11	Area A-11	Area A-11	Area A-12	Area A-12	Area A-12	Area A-12
Surface/subsurface	Surface	Subsurface	Subsurface	Surface	Subsurface	Subsurface	Subsurface
Constituent	CAS No.						
Total Metals (mg/kg) (continued)							
Copper	7440508	NA	NA	NA	NA	NA	NA
Iron	7439896	NA	NA	NA	NA	NA	NA
Lead	7439921	11	NA	NA	NA	NA	NA
Lithium	7439932	NA	NA	NA	NA	NA	NA
Manganese	7439965	NA	NA	NA	NA	NA	NA
Magnesium	7439954	NA	NA	NA	NA	NA	NA
Mercury	7439976	< 0.049	NA	NA	NA	NA	NA
Molybdenum	7439987	NA	NA	NA	NA	NA	NA
Nickel	7440020	NA	NA	NA	NA	NA	NA
Potassium	7440097	NA	NA	NA	NA	NA	NA
Selenium	7782492	< 3.8	NA	NA	NA	NA	NA
Silver	7440224	< 1.9	NA	NA	NA	NA	NA
Sodium	7440235	NA	NA	NA	NA	NA	NA
Strontium	7440246	NA	NA	NA	NA	NA	NA
Thallium	7440280	NA	NA	NA	NA	NA	NA
Tin	7440315	NA	NA	NA	NA	NA	NA
Titanium	7440326	NA	NA	NA	NA	NA	NA
Vanadium	7440622	NA	NA	NA	NA	NA	NA
Zinc	7440666	NA	NA	NA	NA	NA	NA
Other Parameters							
PH	PH	NA	NA	NA	NA	NA	NA
Total Organic Carbon	1012	NA	NA	NA	NA	NA	NA

Notes:

- NA - Not Analyzed.
- J - Estimated value.
- R - Rejected value.

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A12-10-5	A12-1-10	A12-1-15
Sample Depth	5	10	15
Date Collected	12/17/2013	10/9/2013	10/9/2013
Sample Type	Investigation	Investigation	Investigation
RA Area	Eastern	Eastern	Eastern
Area/SWMU	Area A-12	Area A-12	Area A-12
Surface/subsurface	Subsurface	Subsurface	Subsurface
CAS No.			
Constituent			
Volatile Organics (mg/kg)			
1,1,1,2-Tetrachloroethane	630206 < 0.0045	< 0.0035	< 0.0045
1,1,1-Trichloroethane	71556 < 0.0045	< 0.0035	< 0.0045
1,1,2,2-Tetrachloroethane	79345 < 0.0045	< 0.0035	< 0.0045
1,1,2-Trichloroethane	79005 < 0.0045	< 0.0035	< 0.0045
1,1-Dichloroethane	75343 < 0.0045	< 0.0035	< 0.0045
1,1-Dichloroethene	75354 < 0.0045	< 0.0035	< 0.0045
1,1-Dichloropropene	563586 < 0.0045	< 0.0035	< 0.0045
1,2,3-Trichlorobenzene	87616 < 0.0045	< 0.0035	< 0.0045
1,2,3-Trichloropropane	96184 < 0.0045	< 0.0035	< 0.0045
1,2,4-Trichlorobenzene	120821 < 0.0045	< 0.0035	< 0.0045
1,2,4-Trimethylbenzene	95636 < 0.0045	< 0.0035	< 0.0045
1,2-Dibromoethane	106934 < 0.0045	< 0.0035	< 0.0045
1,2-Dichlorobenzene	95501 < 0.0045	< 0.0035	< 0.0045
1,2-Dichloroethane	107062 < 0.0045	< 0.0035	< 0.0045
1,2-Dichloroethene, Total	540590 < 0.0045	NA	NA
1,2-Dichloropropane	78875 < 0.0045	< 0.0035	< 0.0045
1,3,5-Trimethylbenzene	108678 < 0.0045	< 0.0035	< 0.0045
1,3-Dichlorobenzene	541731 < 0.0045	< 0.0035	< 0.0045
1,3-Dichloropropane	142289 < 0.0045	< 0.0035	< 0.0045
1,4-Dichlorobenzene	106467 < 0.0045	< 0.0035	< 0.0045
1,4-Dioxane	123911 NA	< 0.14	< 0.18
2,2-Dichloropropane	594207 < 0.0045	< 0.0035	< 0.0045
2-Butanone	78933 < 0.0091	< 0.018	< 0.023
2-Chloroethyl Vinyl Ether	110758 NA	< 0.018	< 0.023
2-Chlorotoluene	95498 < 0.0045	< 0.0035	< 0.0045
2-Hexanone (methyl butyl ketone)	591786 < 0.0181	< 0.018	< 0.023
3-Chloro-1,2-Dibromopropane	96128 < 0.0091	NA	NA
4-Chlorotoluene	106434 < 0.0045	< 0.0035	< 0.0045
4-Isopropyltoluene	99876 < 0.0045	< 0.0035	< 0.0045
4-Methyl-2-Pentanone	108101 < 0.0091	< 0.018	< 0.023
Acetone	67641 0.0279	< 0.035	< 0.045
Acrolein	107028 NA	< 0.018	< 0.023
Acrylonitrile	107131 NA	< 0.018	< 0.023
Benzene	71432 < 0.0045	< 0.0035	< 0.0045
Bromobenzene	108861 < 0.0045	< 0.0035	< 0.0045
Bromochloromethane	74975 < 0.0045	< 0.0035	< 0.0045
Bromodichloromethane	75274 < 0.0045	< 0.0035	< 0.0045
Bromoform	75252 < 0.0045	< 0.0035	< 0.0045
Bromomethane	74839 < 0.0045	< 0.0035	< 0.0045
Carbon Disulfide	75150 < 0.0045	< 0.0035	< 0.0045
Carbon Tetrachloride	56235 < 0.0045	< 0.0035	< 0.0045
Chlorobenzene	108907 < 0.0045	< 0.0035	< 0.0045
Dibromochloromethane	124481 < 0.0045	< 0.0035	< 0.0045

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A12-10-5	A12-1-10	A12-1-15
Sample Depth	5	10	15
Date Collected	12/17/2013	10/9/2013	10/9/2013
Sample Type	Investigation	Investigation	Investigation
RA Area	Eastern	Eastern	Eastern
Area/SWMU	Area A-12	Area A-12	Area A-12
Surface/subsurface	Subsurface	Subsurface	Subsurface
Constituent	CAS No.		
Volatile Organics (mg/kg) (continued)			
Chloroethane	75003	< 0.0045	< 0.0035
Chloroform	67663	< 0.0045	< 0.0035
Chloromethane	74873	< 0.0045	< 0.0035
Cis-1,2-Dichloroethene	156592	< 0.0045	< 0.0035
Cis-1,3-Dichloropropene	10061015	< 0.0045	< 0.0035
Dibromomethane	74953	< 0.0045	< 0.0035
Dichlorodifluoromethane	75718	< 0.0045	< 0.0035
Ethylbenzene	100414	< 0.0045	< 0.0035
Hexachlorobutadiene	87683	< 0.0045	< 0.0035
Isopropylbenzene	98828	< 0.0201	< 0.0035
M,P-Xylenes	179601231	NA	< 0.007
Methyl Tert-Butyl Ether	1634044	< 0.0045	< 0.0035
Methylene Chloride	75092	< 0.0045	< 0.007
Naphthalene	91203	< 0.0091	< 0.0035
N-Butylbenzene	104518	< 0.0045	< 0.0035
N-Propylbenzene	103651	0.0156	< 0.0035
O-Xylene	95476	NA	< 0.0035
Sec-Butylbenzene	135988	< 0.0045	< 0.0035
Styrene	100425	< 0.0045	< 0.0035
Tert-Butylbenzene	98066	< 0.0045	< 0.0035
Tetrachloroethene	127184	< 0.0045	< 0.0035
Toluene	108883	< 0.0045	< 0.0035
Total Xylenes	1330207	< 0.0045	< 0.007
Trans-1,2-Dichloroethene	156605	< 0.0045	< 0.0035
Trans-1,3-Dichloropropene	10061026	< 0.0045	< 0.0035
Trichloroethene	79016	< 0.0045	< 0.0035
Trichlorofluoromethane	75694	< 0.0045	< 0.0035
Vinyl Acetate	108054	NA	< 0.018
Vinyl Chloride	75014	< 0.0045	< 0.0035
Dibromochloropropane (DBCP)	67708832	NA	< 0.0035
VOCs - Method 3810 Mod			
Benzene	71432	< 0.0084 J	NA
Cis-1,2-Dichloroethene	156592	< 0.0084 J	NA
Ethylbenzene	100414	< 0.0084 J	NA
Tetrachloroethene	127184	< 0.0084 J	NA
Toluene	108883	< 0.0084 J	NA
Trichloroethene	79016	< 0.0084 J	NA
Total Xylenes	1330207	< 0.0084 J	NA

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A12-10-5	A12-1-10	A12-1-15
Sample Depth	5	10	15
Date Collected	12/17/2013	10/9/2013	10/9/2013
Sample Type	Investigation	Investigation	Investigation
RA Area	Eastern	Eastern	Eastern
Area/SWMU	Area A-12	Area A-12	Area A-12
Surface/subsurface	Subsurface	Subsurface	Subsurface
CAS No.			
Constituent			
Semi-Volatile Organics (mg/kg)			
1,2,4-Trichlorobenzene	120821	NA	NA
1,2-Dichlorobenzene	95501	NA	NA
1,2-Diphenylhydrazine	122667	NA	NA
1,3-Dichlorobenzene	541731	NA	NA
1,4-Dichlorobenzene	106467	NA	NA
1-Methylnaphthalene	90120	NA	NA
2,4,5-Trichlorophenol	95954	NA	NA
2,4,6-Trichlorophenol	88062	NA	NA
2,4-Dichlorophenol	120832	NA	NA
2,4-Dimethylphenol	105679	NA	NA
2,4-Dinitrophenol	51285	NA	NA
2,4-Dinitrotoluene	121142	NA	NA
2,6-Dinitrotoluene	606202	NA	NA
2-Chloronaphthalene	91587	NA	NA
2-Chlorophenol	95578	NA	NA
2-Methylnaphthalene	91576	NA	NA
2-Methylphenol	95487	NA	NA
2-Nitroaniline	88744	NA	NA
2-Nitrophenol	88755	NA	NA
3,3'-Dichlorobenzidine	91941	NA	NA
3-Nitroaniline	99092	NA	NA
4,6-Dinitro-2-Methylphenol	534521	NA	NA
4-Bromophenyl Phenyl Ether	101553	NA	NA
4-Chloro-3-Methylphenol	59507	NA	NA
4-Chloroaniline	106478	NA	NA
4-Chlorophenyl Phenyl Ether	7005723	NA	NA
4-Nitroaniline	100016	NA	NA
4-Nitrophenol	100027	NA	NA
Acenaphthene	83329	NA	NA
Acenaphthylene	208968	NA	NA
Aniline	62533	NA	NA
Anthracene	120127	NA	NA
Benidine	92875	NA	NA
Benzo(A)Anthracene	56553	NA	NA
Benzo(A)Pyrene	50328	NA	NA
Benzo(B)Fluoranthene	205992	NA	NA
Benzo(G,H,I)Perylene	191242	NA	NA
Benzo(K)Fluoranthene	207089	NA	NA
Benzoic Acid	65850	NA	NA
Benzyl Alcohol	100516	NA	NA
Bis(2-Chloroethoxy)Methane	111911	NA	NA
Bis(2-Chloroethyl)Ether	111444	NA	NA
Bis(2-Chloroisopropyl)Ether	108601	NA	NA

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A12-10-5	A12-1-10	A12-1-15
Sample Depth	5	10	15
Date Collected	12/17/2013	10/9/2013	10/9/2013
Sample Type	Investigation	Investigation	Investigation
RA Area	Eastern	Eastern	Eastern
Area/SWMU	Area A-12	Area A-12	Area A-12
Surface/subsurface	Subsurface	Subsurface	Subsurface
Constituent	CAS No.		
Semi-Volatile Organics (mg/kg) (continued)			
Bis(2-Ethylhexyl) Phthalate	117817	NA	NA
Butyl Benzyl Phthalate	85687	NA	NA
Carbazole	86748	NA	NA
Chrysene	218019	NA	NA
Dibenz(A,H)Anthracene	53703	NA	NA
Dibenzofuran	132649	NA	NA
Diethyl Phthalate	84662	NA	NA
Dimethyl Phthalate	131113	NA	NA
Di-N-Butyl Phthalate	84742	NA	NA
Di-N-Octyl Phthalate	117840	NA	NA
Fluoranthene	206440	NA	NA
Fluorene	86737	NA	NA
Hexachloro-1,3-Cyclopentadiene	77474	NA	NA
Hexachlorobenzene	118741	NA	NA
Hexachlorobutadiene	87683	NA	NA
Hexachloroethane	67721	NA	NA
Indeno(1,2,3-Cd)Pyrene	193395	NA	NA
Isophorone	78591	NA	NA
M-,P-Cresol Mixture	15831104	NA	NA
Naphthalene	91203	NA	NA
Nitrobenzene	98953	NA	NA
N-Nitrosodimethylamine	62759	NA	NA
N-Nitrosodi-N-Propylamine	621647	NA	NA
N-Nitrosodiphenylamine	86306	NA	NA
Pentachlorophenol	87865	NA	NA
Phenanthrene	85018	NA	NA
Phenol	108952	NA	NA
Pyrene	129000	NA	NA
Pyridine	110861	NA	NA
PCBs (mg/kg)			
Pcb- 1016	12674112	NA	NA
Pcb- 1221	11104282	NA	NA
Pcb- 1232	11141165	NA	NA
Pcb- 1242	53469219	NA	NA
Pcb- 1248	12672296	NA	NA
Pcb- 1254	11097691	NA	NA
Pcb- 1260	11096825	NA	NA
Total Petroleum Hydrocarbons (TPH) (mg/kg)			
DRO (C10-C28) Range	DRO	NA	NA

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A12-10-5 5 12/17/2013 Investigation Eastern Area A-12 Subsurface	A12-1-10 10 10/9/2013 Investigation Eastern Area A-12 Subsurface	A12-1-15 15 10/9/2013 Investigation Eastern Area A-12 Subsurface
Constituent			
Herbicides/Pesticides (mg/kg)			
2,4,5-T	93765	NA	NA
2,4-D	94757	NA	NA
2,4-Db	94826	NA	NA
4,4'-DDD	72548	NA	NA
4,4'-DDE	72559	NA	NA
4,4'-DDT	50293	NA	NA
Aldrin	309002	NA	NA
Alpha-BHC	319846	NA	NA
Beta-BHC	319857	NA	NA
Delta-BHC	319868	NA	NA
Alpha-Chlordane	5103719	NA	NA
Dalapon	75990	NA	NA
Dicamba	1918009	NA	NA
Dichoroprop	120365	NA	NA
Dieldrin	60571	NA	NA
Dinoseb	88857	NA	NA
Endosulfan I	959988	NA	NA
Endosulfan II	33213659	NA	NA
Endosulfan sulfate	1031078	NA	NA
Endrin	72208	NA	NA
Endrin aldehyde	7421934	NA	NA
Endrin ketone	53494705	NA	NA
Gamma-BHC	58899	NA	NA
Gamma-Chlordane	5103742	NA	NA
Heptachlor	76448	NA	NA
Heptachlor epoxide	1024573	NA	NA
Mcpa	94746	NA	NA
Mcpp	93652	NA	NA
Methoxychlor	72435	NA	NA
Pentachlorophenol	87865	NA	NA
Silvex (2,4,5-TP)	93721	NA	NA
Toxaphene	8001352	NA	NA
Total Metals (mg/kg)			
Aluminum	7429905	NA	NA
Antimony	7440360	NA	NA
Arsenic	7440382	NA	NA
Barium	7440393	NA	NA
Beryllium	7440417	NA	NA
Boron	7440428	NA	NA
Cadmium	7440439	NA	NA
Calcium	7440702	NA	NA
Chromium	7440473	NA	NA
Cobalt	7440484	NA	NA

Risk-Based Remedies
RBR Consulting, Inc.

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

	Sample Identification	A12-10-5	A12-1-10	A12-1-15
	Sample Depth	5	10	15
	Date Collected	12/17/2013	10/9/2013	10/9/2013
	Sample Type	Investigation	Investigation	Investigation
	RA Area	Eastern	Eastern	Eastern
	Area/SWMU	Area A-12	Area A-12	Area A-12
	Surface/subsurface	Subsurface	Subsurface	Subsurface
Constituent	CAS No.			
Total Metals (mg/kg) (continued)				
Copper	7440508	NA	NA	NA
Iron	7439896	NA	NA	NA
Lead	7439921	NA	NA	NA
Lithium	7439932	NA	NA	NA
Manganese	7439965	NA	NA	NA
Magnesium	7439954	NA	NA	NA
Mercury	7439976	NA	NA	NA
Molybdenum	7439987	NA	NA	NA
Nickel	7440020	NA	NA	NA
Potassium	7440097	NA	NA	NA
Selenium	7782492	NA	NA	NA
Silver	7440224	NA	NA	NA
Sodium	7440235	NA	NA	NA
Strontium	7440246	NA	NA	NA
Thallium	7440280	NA	NA	NA
Tin	7440315	NA	NA	NA
Titanium	7440326	NA	NA	NA
Vanadium	7440622	NA	NA	NA
Zinc	7440666	NA	NA	NA
Other Parameters				
PH	PH	NA	NA	NA
Total Organic Carbon	1012	NA	NA	NA

Notes:
 NA - Not Analyzed.
 J - Estimated value.
 R - Rejected value.

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A12-1-2 2 10/9/2013 Investigation Eastern Area 12 Surface	A12-1-5 5 10/9/2013 Investigation Eastern Area 12 Subsurface	A12-1-5Dup 5 10/9/2013 Duplicate Eastern Area 12 Subsurface	A12-1-INT 17 10/9/2013 Investigation Eastern Area 12 Subsurface	A12-2-0.5 0.5 10/9/2013 Investigation Eastern Area 12 Surface	A12-2-2 2 10/9/2013 Investigation Eastern Area 12 Surface	A12-3-0.5 0.5 10/18/2013 Investigation Eastern Area 12 Surface
Constituent							
Volatile Organics (mg/kg)							
1,1,1,2-Tetrachloroethane	630206	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
1,1,1-Trichloroethane	71556	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
1,1,2,2-Tetrachloroethane	79345	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
1,1,2-Trichloroethane	79005	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
1,1-Dichloroethane	75343	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
1,1-Dichloroethene	75354	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
1,1-Dichloropropene	563586	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
1,2,3-Trichlorobenzene	87616	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
1,2,3-Trichloropropane	96184	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
1,2,4-Trichlorobenzene	120821	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
1,2,4-Trimethylbenzene	95636	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
1,2-Dibromoethane	106934	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
1,2-Dichlorobenzene	95501	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
1,2-Dichloroethane	107062	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
1,2-Dichloroethene, Total	540590	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	78875	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
1,3,5-Trimethylbenzene	108678	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
1,3-Dichlorobenzene	541731	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
1,3-Dichloropropane	142289	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
1,4-Dichlorobenzene	106467	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
1,4-Dioxane	123911	< 0.26	< 0.24	< 0.24	< 0.19	< 0.17	< 0.19
2,2-Dichloropropane	594207	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
2-Butanone	78933	< 0.033	< 0.03	< 0.03	< 0.023	< 0.021	< 0.023
2-Chloroethyl Vinyl Ether	110758	< 0.033	< 0.03	< 0.03	< 0.023	< 0.021	< 0.023
2-Chlorotoluene	95498	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
2-Hexanone (methyl butyl ketone)	591786	< 0.033	< 0.03	< 0.03	< 0.023	< 0.021	< 0.023
3-Chloro-1,2-Dibromopropane	96128	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	106434	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
4-Isopropyltoluene	99876	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
4-Methyl-2-Pentanone	108101	< 0.033	< 0.03	< 0.03	< 0.023	< 0.021	< 0.023
Acetone	67641	< 0.065	< 0.059	< 0.06	< 0.046	< 0.042	0.0376
Acrolein	107028	< 0.033	< 0.03	< 0.03	< 0.023	< 0.021	< 0.023
Acrylonitrile	107131	< 0.033	< 0.03	< 0.03	< 0.023	< 0.021	< 0.023
Benzene	71432	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
Bromobenzene	108861	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
Bromochloromethane	74975	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
Bromodichloromethane	75274	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
Bromoform	75252	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
Bromomethane	74839	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
Carbon Disulfide	75150	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
Carbon Tetrachloride	56235	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
Chlorobenzene	108907	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046
Dibromochloromethane	124481	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0046

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A12-1-2 2 10/9/2013 Investigation Eastern Area 12 Surface	A12-1-5 5 10/9/2013 Investigation Eastern Area 12 Subsurface	A12-1-5Dup 5 10/9/2013 Duplicate Eastern Area 12 Subsurface	A12-1-INT 17 10/9/2013 Investigation Eastern Area 12 Subsurface	A12-2-0.5 0.5 10/9/2013 Investigation Eastern Area 12 Surface	A12-2-2 2 10/9/2013 Investigation Eastern Area 12 Surface	A12-3-0.5 0.5 10/18/2013 Investigation Eastern Area 12 Surface	
Constituent								
Volatiles Organics (mg/kg) (continued)								
Chloroethane	75003	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
Chloroform	67663	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
Chloromethane	74873	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
Cis-1,2-Dichloroethene	156592	< 0.0065	0.0018	J < 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
Cis-1,3-Dichloropropene	10061015	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
Dibromomethane	74953	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
Dichlorodifluoromethane	75718	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
Ethylbenzene	100414	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
Hexachlorobutadiene	87683	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
Isopropylbenzene	98828	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
M,P-Xylenes	179601231	< 0.013	0.0034	J < 0.0028	< 0.0093	< 0.0085	< 0.011	< 0.0093
Methyl Tert-Butyl Ether	1634044	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
Methylene Chloride	75092	< 0.013	< 0.012	< 0.012	< 0.0093	< 0.0085	< 0.011	< 0.0093
Naphthalene	91203	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
N-Butylbenzene	104518	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
N-Propylbenzene	103651	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
O-Xylene	95476	< 0.0065	0.0015	J < 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
Sec-Butylbenzene	135988	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
Styrene	100425	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
Tert-Butylbenzene	98066	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
Tetrachloroethene	127184	0.0037	J 0.0123	0.0287	< 0.0046	0.0119	0.0174	< 0.0046
Toluene	108883	< 0.0065	0.0052	J 0.0023	< 0.0046	< 0.0042	< 0.0053	< 0.0046
Total Xylenes	1330207	< 0.013	0.0049	0.0028	< 0.0093	< 0.0085	< 0.011	< 0.0093
Trans-1,2-Dichloroethene	156605	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
Trans-1,3-Dichloropropene	10061026	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
Trichloroethene	79016	< 0.0065	0.0024	J 0.0049	< 0.0046	0.0024	J 0.0027	< 0.0046
Trichlorofluoromethane	75694	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
Vinyl Acetate	108054	< 0.033	< 0.03	< 0.03	< 0.023	< 0.021	< 0.027	< 0.023
Vinyl Chloride	75014	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
Dibromochloropropane (DBCP)	67708832	< 0.0065	< 0.0059	< 0.006	< 0.0046	< 0.0042	< 0.0053	< 0.0046
VOCs - Method 3810 Mod								
Benzene	71432	NA	NA	NA	NA	NA	NA	NA
Cis-1,2-Dichloroethene	156592	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100414	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	127184	NA	NA	NA	NA	NA	NA	NA
Toluene	108883	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	79016	NA	NA	NA	NA	NA	NA	NA
Total Xylenes	1330207	NA	NA	NA	NA	NA	NA	NA

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Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A12-1-2 2 10/9/2013 Investigation Eastern Area 12 Surface	A12-1-5 5 10/9/2013 Investigation Eastern Area 12 Subsurface	A12-1-5Dup 5 10/9/2013 Duplicate Eastern Area 12 Subsurface	A12-1-INT 17 10/9/2013 Investigation Eastern Area 12 Subsurface	A12-2-0.5 0.5 10/9/2013 Investigation Eastern Area 12 Surface	A12-2-2 2 10/9/2013 Investigation Eastern Area 12 Surface	A12-3-0.5 0.5 10/18/2013 Investigation Eastern Area 12 Surface
Semi-Volatile Organics (mg/kg)							
1,2,4-Trichlorobenzene	120821	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95501	NA	NA	NA	NA	NA	NA
1,2-Diphenylhydrazine	122667	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541731	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106467	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene	90120	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	95954	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	88062	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	120832	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	105679	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	51285	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	121142	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	606202	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	91587	NA	NA	NA	NA	NA	NA
2-Chlorophenol	95578	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	91576	NA	NA	NA	NA	NA	NA
2-Methylphenol	95487	NA	NA	NA	NA	NA	NA
2-Nitroaniline	88744	NA	NA	NA	NA	NA	NA
2-Nitrophenol	88755	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	91941	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99092	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-Methylphenol	534521	NA	NA	NA	NA	NA	NA
4-Bromophenyl Phenyl Ether	101553	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	59507	NA	NA	NA	NA	NA	NA
4-Chloroaniline	106478	NA	NA	NA	NA	NA	NA
4-Chlorophenyl Phenyl Ether	7005723	NA	NA	NA	NA	NA	NA
4-Nitroaniline	100016	NA	NA	NA	NA	NA	NA
4-Nitrophenol	100027	NA	NA	NA	NA	NA	NA
Acenaphthene	83329	NA	NA	NA	NA	NA	NA
Acenaphthylene	208968	NA	NA	NA	NA	NA	NA
Aniline	62533	NA	NA	NA	NA	NA	NA
Anthracene	120127	NA	NA	NA	NA	NA	NA
Benzidine	92875	NA	NA	NA	NA	NA	NA
Benzo(A)Anthracene	56553	NA	NA	NA	NA	NA	NA
Benzo(A)Pyrene	50328	NA	NA	NA	NA	NA	NA
Benzo(B)Fluoranthene	205992	NA	NA	NA	NA	NA	NA
Benzo(G,H,I)Perylene	191242	NA	NA	NA	NA	NA	NA
Benzo(K)Fluoranthene	207089	NA	NA	NA	NA	NA	NA
Benzoic Acid	65850	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	100516	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethoxy)Methane	111911	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethyl)Ether	111444	NA	NA	NA	NA	NA	NA
Bis(2-Chloroisopropyl)Ether	108601	NA	NA	NA	NA	NA	NA

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Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A12-1-2	A12-1-5	A12-1-5Dup	A12-1-INT	A12-2-0.5	A12-2-2	A12-3-0.5
Sample Depth	2	5	5	17	0.5	2	0.5
Date Collected	10/9/2013	10/9/2013	10/9/2013	10/9/2013	10/9/2013	10/9/2013	10/18/2013
Sample Type	Investigation	Investigation	Duplicate	Investigation	Investigation	Investigation	Investigation
RA Area	Eastern	Eastern	Eastern	Eastern	Eastern	Eastern	Eastern
Area/SWMU	Area 12	Area 12	Area 12	Area 12	Area 12	Area 12	Area 12
Surface/subsurface	Surface	Subsurface	Subsurface	Subsurface	Surface	Surface	Surface
Constituent	CAS No.						
Semi-Volatile Organics (mg/kg) (continued)							
Bis(2-Ethylhexyl) Phthalate	117817	NA	NA	NA	NA	NA	NA
Butyl Benzyl Phthalate	85687	NA	NA	NA	NA	NA	NA
Carbazole	86748	NA	NA	NA	NA	NA	NA
Chrysene	218019	NA	NA	NA	NA	NA	NA
Dibenz(A,H)Anthracene	53703	NA	NA	NA	NA	NA	NA
Dibenzofuran	132649	NA	NA	NA	NA	NA	NA
Diethyl Phthalate	84662	NA	NA	NA	NA	NA	NA
Dimethyl Phthalate	131113	NA	NA	NA	NA	NA	NA
Di-N-Butyl Phthalate	84742	NA	NA	NA	NA	NA	NA
Di-N-Octyl Phthalate	117840	NA	NA	NA	NA	NA	NA
Fluoranthene	206440	NA	NA	NA	NA	NA	NA
Fluorene	86737	NA	NA	NA	NA	NA	NA
Hexachloro-1,3-Cyclopentadiene	77474	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	118741	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	87683	NA	NA	NA	NA	NA	NA
Hexachloroethane	67721	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-Cd)Pyrene	193395	NA	NA	NA	NA	NA	NA
Isophorone	78591	NA	NA	NA	NA	NA	NA
M-,P-Cresol Mixture	15831104	NA	NA	NA	NA	NA	NA
Naphthalene	91203	NA	NA	NA	NA	NA	NA
Nitrobenzene	98953	NA	NA	NA	NA	NA	NA
N-Nitrosodimethylamine	62759	NA	NA	NA	NA	NA	NA
N-Nitrosodi-N-Propylamine	621647	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	86306	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Phenanthrene	85018	NA	NA	NA	NA	NA	NA
Phenol	108952	NA	NA	NA	NA	NA	NA
Pyrene	129000	NA	NA	NA	NA	NA	NA
Pyridine	110861	NA	NA	NA	NA	NA	NA
PCBs (mg/kg)							
Pcb- 1016	12674112	NA	NA	NA	NA	NA	NA
Pcb- 1221	11104282	NA	NA	NA	NA	NA	NA
Pcb- 1232	11141165	NA	NA	NA	NA	NA	NA
Pcb- 1242	53469219	NA	NA	NA	NA	NA	NA
Pcb- 1248	12672296	NA	NA	NA	NA	NA	NA
Pcb- 1254	11097691	NA	NA	NA	NA	NA	NA
Pcb- 1260	11096825	NA	NA	NA	NA	NA	NA
Total Petroleum Hydrocarbons (TPH) (mg/kg)							
DRO (C10-C28) Range	DRO	NA	NA	NA	NA	NA	NA

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Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification Sample Depth Date Collected Sample Type RA Area Area/SWMU Surface/subsurface CAS No.	A12-1-2 2 10/9/2013 Investigation Eastern Area 12 Surface	A12-1-5 5 10/9/2013 Investigation Eastern Area 12 Subsurface	A12-1-5Dup 5 10/9/2013 Duplicate Eastern Area 12 Subsurface	A12-1-INT 17 10/9/2013 Investigation Eastern Area 12 Subsurface	A12-2-0.5 0.5 10/9/2013 Investigation Eastern Area 12 Surface	A12-2-2 2 10/9/2013 Investigation Eastern Area 12 Surface	A12-3-0.5 0.5 10/18/2013 Investigation Eastern Area 12 Surface
Constituent							
Herbicides/Pesticides (mg/kg)							
2,4,5-T	93765	NA	NA	NA	NA	NA	NA
2,4-D	94757	NA	NA	NA	NA	NA	NA
2,4-Db	94826	NA	NA	NA	NA	NA	NA
4,4'-DDD	72548	NA	NA	NA	NA	NA	NA
4,4'-DDE	72559	NA	NA	NA	NA	NA	NA
4,4'-DDT	50293	NA	NA	NA	NA	NA	NA
Aldrin	309002	NA	NA	NA	NA	NA	NA
Alpha-BHC	319846	NA	NA	NA	NA	NA	NA
Beta-BHC	319857	NA	NA	NA	NA	NA	NA
Delta-BHC	319868	NA	NA	NA	NA	NA	NA
Alpha-Chlordane	5103719	NA	NA	NA	NA	NA	NA
Dalapon	75990	NA	NA	NA	NA	NA	NA
Dicamba	1918009	NA	NA	NA	NA	NA	NA
Dichoroprop	120365	NA	NA	NA	NA	NA	NA
Dieldrin	60571	NA	NA	NA	NA	NA	NA
Dinoseb	88857	NA	NA	NA	NA	NA	NA
Endosulfan I	959988	NA	NA	NA	NA	NA	NA
Endosulfan II	33213659	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	1031078	NA	NA	NA	NA	NA	NA
Endrin	72208	NA	NA	NA	NA	NA	NA
Endrin aldehyde	7421934	NA	NA	NA	NA	NA	NA
Endrin ketone	53494705	NA	NA	NA	NA	NA	NA
Gamma-BHC	58899	NA	NA	NA	NA	NA	NA
Gamma-Chlordane	5103742	NA	NA	NA	NA	NA	NA
Heptachlor	76448	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	1024573	NA	NA	NA	NA	NA	NA
Mcpa	94746	NA	NA	NA	NA	NA	NA
Mcpp	93652	NA	NA	NA	NA	NA	NA
Methoxychlor	72435	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Silvex (2,4,5-TP)	93721	NA	NA	NA	NA	NA	NA
Toxaphene	8001352	NA	NA	NA	NA	NA	NA
Total Metals (mg/kg)							
Aluminum	7429905	NA	NA	NA	NA	NA	NA
Antimony	7440360	NA	NA	NA	NA	NA	NA
Arsenic	7440382	NA	NA	NA	NA	NA	NA
Barium	7440393	NA	NA	NA	NA	NA	NA
Beryllium	7440417	NA	NA	NA	NA	NA	NA
Boron	7440428	NA	NA	NA	NA	NA	NA
Cadmium	7440439	NA	NA	NA	NA	NA	NA
Calcium	7440702	NA	NA	NA	NA	NA	NA
Chromium	7440473	NA	NA	NA	NA	NA	NA
Cobalt	7440484	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
 Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A12-1-2	A12-1-5	A12-1-5Dup	A12-1-INT	A12-2-0.5	A12-2-2	A12-3-0.5
Sample Depth	2	5	5	17	0.5	2	0.5
Date Collected	10/9/2013	10/9/2013	10/9/2013	10/9/2013	10/9/2013	10/9/2013	10/18/2013
Sample Type	Investigation	Investigation	Duplicate	Investigation	Investigation	Investigation	Investigation
RA Area	Eastern	Eastern	Eastern	Eastern	Eastern	Eastern	Eastern
Area/SWMU	Area 12	Area 12	Area 12	Area 12	Area 12	Area 12	Area 12
Surface/subsurface	Surface	Subsurface	Subsurface	Subsurface	Surface	Surface	Surface
Constituent	CAS No.						
Total metals (mg/kg) (continued)							
Copper	7440508	NA	NA	NA	NA	NA	NA
Iron	7439896	NA	NA	NA	NA	NA	NA
Lead	7439921	NA	NA	NA	NA	NA	NA
Lithium	7439932	NA	NA	NA	NA	NA	NA
Manganese	7439965	NA	NA	NA	NA	NA	NA
Magnesium	7439954	NA	NA	NA	NA	NA	NA
Mercury	7439976	NA	NA	NA	NA	NA	NA
Molybdenum	7439987	NA	NA	NA	NA	NA	NA
Nickel	7440020	NA	NA	NA	NA	NA	NA
Potassium	7440097	NA	NA	NA	NA	NA	NA
Selenium	7782492	NA	NA	NA	NA	NA	NA
Silver	7440224	NA	NA	NA	NA	NA	NA
Sodium	7440235	NA	NA	NA	NA	NA	NA
Strontium (Total)	7440246	NA	NA	NA	NA	NA	NA
Thallium	7440280	NA	NA	NA	NA	NA	NA
Tin	7440315	NA	NA	NA	NA	NA	NA
Titanium	7440326	NA	NA	NA	NA	NA	NA
Vanadium	7440622	NA	NA	NA	NA	NA	NA
Zinc	7440666	NA	NA	NA	NA	NA	NA
Other Parameters							
PH	PH	NA	NA	NA	NA	NA	NA
Total Organic Carbon	1012	NA	NA	NA	NA	NA	NA

Notes:
 NA - Not Analyzed.
 J - Estimated value.
 R- Rejected value.

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A12-3-10	A12-3-15	A12-3-19	A12-3-2	A12-3-5	A12-4-0.5	A12-4-2
Sample Depth	10	15	19	2	5	0.5	2
Date Collected	10/9/2013	10/9/2013	10/9/2013	10/9/2013	10/9/2013	10/9/2013	10/9/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area 12						
Surface/subsurface	Subsurface	Subsurface	Subsurface	Surface	Subsurface	Surface	Surface
Constituent	CAS No.						
Volatile Organics (mg/kg)							
1,1,1,2-Tetrachloroethane	630206	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
1,1,1-Trichloroethane	71556	< 2.3	< 0.0048	< 0.0037	< 0.108	< 0.0031	< 0.0034
1,1,2,2-Tetrachloroethane	79345	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
1,1,2-Trichloroethane	79005	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
1,1-Dichloroethane	75343	< 2.3	< 0.0048	< 0.0037	< 0.152	< 0.0045	< 0.0076
1,1-Dichloroethene	75354	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0017	< 0.0076
1,1-Dichloropropene	563586	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
1,2,3-Trichlorobenzene	87616	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
1,2,3-Trichloropropane	96184	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
1,2,4-Trichlorobenzene	120821	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
1,2,4-Trimethylbenzene	95636	107	0.0333	0.007	34.4	2.72	< 0.0076
1,2-Dibromoethane	106934	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
1,2-Dichlorobenzene	95501	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
1,2-Dichloroethane	107062	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
1,2-Dichloroethene, Total	540590	NA	NA	NA	NA	NA	NA
1,2-Dichloropropene	78875	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
1,3,5-Trimethylbenzene	108678	51.3	0.0129	0.0023	14.3	1.15	< 0.0076
1,3-Dichlorobenzene	541731	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
1,3-Dichloropropane	142289	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
1,4-Dichlorobenzene	106467	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
1,4-Dioxane	123911	< 90	< 0.19	< 0.15	< 14	< 0.12	< 0.03
2,2-Dichloropropane	594207	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
2-Butanone	78933	< 11	< 0.024	< 0.019	< 1.8	< 0.015	< 0.038
2-Chloroethyl Vinyl Ether	110758	< 11	< 0.024	< 0.019	< 1.8	< 0.015	< 0.038
2-Chlorotoluene	95498	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
2-Hexanone (methyl butyl ketone)	591786	< 11	< 0.024	< 0.019	< 1.8	< 0.015	< 0.038
3-Chloro-1,2-Dibromopropane	96128	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	106434	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
4-Isopropyltoluene	99876	3.61	< 0.0048	< 0.0037	1.29	0.0162	< 0.0076
4-Methyl-2-Pentanone	108101	< 11	< 0.024	< 0.019	< 1.8	< 0.015	< 0.038
Acetone	67641	< 23	0.0298	< 0.037	< 3.5	0.0585	< 0.076
Acrolein	107028	< 11	< 0.024	< 0.019	< 1.8	< 0.015	< 0.038
Acrylonitrile	107131	< 11	< 0.024	< 0.019	< 1.8	< 0.015	< 0.038
Benzene	71432	< 2.3	< 0.0048	< 0.0037	< 0.35	0.0012	< 0.0076
Bromobenzene	108861	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
Bromochloromethane	74975	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
Bromodichloromethane	75274	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
Bromoform	75252	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
Bromomethane	74839	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
Carbon Disulfide	75150	< 2.3	0.0043	< 0.0037	< 0.35	< 0.0031	< 0.0076
Carbon Tetrachloride	56235	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
Chlorobenzene	108907	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
Dibromochloromethane	124481	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A12-3-10	A12-3-15	A12-3-19	A12-3-2	A12-3-5	A12-4-0.5	A12-4-2
Sample Depth	10	15	19	2	5	0.5	2
Date Collected	10/9/2013	10/9/2013	10/9/2013	10/9/2013	10/9/2013	10/9/2013	10/9/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area 12						
Surface/subsurface	Subsurface	Subsurface	Subsurface	Surface	Subsurface	Surface	Surface
Constituent	CAS No.						
Volatile Organics (mg/kg) (continued)							
Chloroethane	75003	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
Chloroform	67663	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
Chloromethane	74873	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
Cis-1,2-Dichloroethene	156592	57.3	0.0021	< 0.0037	0.474	1.87	< 0.0076
Cis-1,3-Dichloropropene	10061015	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
Dibromomethane	74953	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
Dichlorodifluoromethane	75718	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
Ethylbenzene	100414	881	0.0232	0.0032	42.1	22.2	< 0.0076
Hexachlorobutadiene	87683	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
Isopropylbenzene	98828	29.8	0.0021	0.001	2.5	0.561	< 0.0076
M,P-Xylenes	179601231	3550	0.108	0.0804	211	76.9	< 0.015
Methyl Tert-Butyl Ether	1634044	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
Methylene Chloride	75092	< 4.5	< 0.0095	< 0.0074	< 0.7	< 0.0062	< 0.015
Naphthalene	91203	4.96	0.0062	< 0.0037	2	0.0269	< 0.0076
N-Butylbenzene	104518	4.24	0.0019	< 0.0037	0.734	0.0212	< 0.0076
N-Propylbenzene	103651	34	0.004	0.0014	3.04	0.591	< 0.0076
O-Xylene	95476	1090	0.0357	0.0049	17.8	18.1	< 0.0076
Sec-Butylbenzene	135988	3.83	0.0012	< 0.0037	0.722	0.0171	< 0.0076
Styrene	100425	13.2	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
Tert-Butylbenzene	98066	< 2.3	< 0.0048	< 0.0037	0.147	< 0.0031	< 0.0076
Tetrachloroethene	127184	277	0.0012	< 0.0037	0.936	< 0.0031	< 0.0353
Toluene	108883	1130	0.0142	0.0026	4.63	12	< 0.0076
Total Xylenes	1330207	4640	0.1437	0.0853	228.8	95	< 0.015
Trans-1,2-Dichloroethene	156605	< 2.3	< 0.0048	< 0.0037	< 0.35	0.00066	< 0.0076
Trans-1,3-Dichloropropene	10061026	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
Trichloroethene	79016	28.2	< 0.0048	< 0.0037	1.34	< 0.0031	0.0553
Trichlorofluoromethane	75694	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
Vinyl Acetate	108054	< 11	< 0.024	< 0.019	< 1.8	< 0.015	< 0.038
Vinyl Chloride	75014	< 2.3	< 0.0048	< 0.0037	< 0.35	0.0814	< 0.0076
Dibromochloropropane (DBCP)	67708832	< 2.3	< 0.0048	< 0.0037	< 0.35	< 0.0031	< 0.0076
VOCs - Method 3810 Mod							
Benzene	71432	NA	NA	NA	NA	NA	NA
Cis-1,2-Dichloroethene	156592	NA	NA	NA	NA	NA	NA
Ethylbenzene	100414	NA	NA	NA	NA	NA	NA
Tetrachloroethene	127184	NA	NA	NA	NA	NA	NA
Toluene	108883	NA	NA	NA	NA	NA	NA
Trichloroethene	79016	NA	NA	NA	NA	NA	NA
Total Xylenes	1330207	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A12-3-10	A12-3-15	A12-3-19	A12-3-2	A12-3-5	A12-4-0.5	A12-4-2
Sample Depth	10	15	19	2	5	0.5	2
Date Collected	10/9/2013	10/9/2013	10/9/2013	10/9/2013	10/9/2013	10/9/2013	10/9/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area 12						
Surface/subsurface	Subsurface	Subsurface	Subsurface	Surface	Subsurface	Surface	Surface
CAS No.							
Semi-Volatile Organics (mg/kg)							
1,2,4-Trichlorobenzene	120821	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95501	NA	NA	NA	NA	NA	NA
1,2-Diphenylhydrazine	122667	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541731	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106467	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene	90120	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	95954	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	88062	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	120832	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	105679	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	51285	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	121142	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	606202	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	91587	NA	NA	NA	NA	NA	NA
2-Chlorophenol	95578	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	91576	NA	NA	NA	NA	NA	NA
2-Methylphenol	95487	NA	NA	NA	NA	NA	NA
2-Nitroaniline	88744	NA	NA	NA	NA	NA	NA
2-Nitrophenol	88755	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	91941	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99092	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-Methylphenol	534521	NA	NA	NA	NA	NA	NA
4-Bromophenyl Phenyl Ether	101553	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol	59507	NA	NA	NA	NA	NA	NA
4-Chloroaniline	106478	NA	NA	NA	NA	NA	NA
4-Chlorophenyl Phenyl Ether	7005723	NA	NA	NA	NA	NA	NA
4-Nitroaniline	100016	NA	NA	NA	NA	NA	NA
4-Nitrophenol	100027	NA	NA	NA	NA	NA	NA
Acenaphthene	83329	NA	NA	NA	NA	NA	NA
Acenaphthylene	208968	NA	NA	NA	NA	NA	NA
Aniline	62533	NA	NA	NA	NA	NA	NA
Anthracene	120127	NA	NA	NA	NA	NA	NA
Benzidine	92875	NA	NA	NA	NA	NA	NA
Benzo(A)Anthracene	56553	NA	NA	NA	NA	NA	NA
Benzo(A)Pyrene	50328	NA	NA	NA	NA	NA	NA
Benzo(B)Fluoranthene	205992	NA	NA	NA	NA	NA	NA
Benzo(G,H,I)Perylene	191242	NA	NA	NA	NA	NA	NA
Benzo(K)Fluoranthene	207089	NA	NA	NA	NA	NA	NA
Benzoic Acid	65850	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	100516	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethoxy)Methane	111911	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethyl)Ether	111444	NA	NA	NA	NA	NA	NA
Bis(2-Chloroisopropyl)Ether	108601	NA	NA	NA	NA	NA	NA

Table A-1

Soil Analytical Data
Clean Harbors Kansas, LLC- Wichita, Kansas

Sample Identification	A12-3-10	A12-3-15	A12-3-19	A12-3-2	A12-3-5	A12-4-0.5	A12-4-2
Sample Depth	10	15	19	2	5	0.5	2
Date Collected	10/9/2013	10/9/2013	10/9/2013	10/9/2013	10/9/2013	10/9/2013	10/9/2013
Sample Type	Investigation						
RA Area	Eastern						
Area/SWMU	Area 12						
Surface/subsurface	Subsurface	Subsurface	Subsurface	Surface	Subsurface	Surface	Surface
Constituent	CAS No.						
Semi-Volatile Organics (mg/kg) (continued)							
Bis(2-Ethylhexyl) Phthalate	117817	NA	NA	NA	NA	NA	NA
Butyl Benzyl Phthalate	85687	NA	NA	NA	NA	NA	NA
Carbazole	86748	NA	NA	NA	NA	NA	NA
Chrysene	218019	NA	NA	NA	NA	NA	NA
Dibenz(A,H)Anthracene	53703	NA	NA	NA	NA	NA	NA
Dibenzofuran	132649	NA	NA	NA	NA	NA	NA
Diethyl Phthalate	84662	NA	NA	NA	NA	NA	NA
Dimethyl Phthalate	131113	NA	NA	NA	NA	NA	NA
Di-N-Butyl Phthalate	84742	NA	NA	NA	NA	NA	NA
Di-N-Octyl Phthalate	117840	NA	NA	NA	NA	NA	NA
Fluoranthene	206440	NA	NA	NA	NA	NA	NA
Fluorene	86737	NA	NA	NA	NA	NA	NA
Hexachloro-1,3-Cyclopentadiene	77474	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	118741	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	87683	NA	NA	NA	NA	NA	NA
Hexachloroethane	67721	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-Cd)Pyrene	193395	NA	NA	NA	NA	NA	NA
Isophorone	78591	NA	NA	NA	NA	NA	NA
M-,P-Cresol Mixture	15831104	NA	NA	NA	NA	NA	NA
Naphthalene	91203	NA	NA	NA	NA	NA	NA
Nitrobenzene	98953	NA	NA	NA	NA	NA	NA
N-Nitrosodimethylamine	62759	NA	NA	NA	NA	NA	NA
N-Nitrosodi-N-Propylamine	621647	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	86306	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87865	NA	NA	NA	NA	NA	NA
Phenanthrene	85018	NA	NA	NA	NA	NA	NA
Phenol	108952	NA	NA	NA	NA	NA	NA
Pyrene	129000	NA	NA	NA	NA	NA	NA
Pyridine	110861	NA	NA	NA	NA	NA	NA
PCBs (mg/kg)							
Pcb- 1016	12674112	NA	NA	NA	NA	NA	NA
Pcb- 1221	11104282	NA	NA	NA	NA	NA	NA
Pcb- 1232	11141165	NA	NA	NA	NA	NA	NA
Pcb- 1242	53469219	NA	NA	NA	NA	NA	NA
Pcb- 1248	12672296	NA	NA	NA	NA	NA	NA
Pcb- 1254	11097691	NA	NA	NA	NA	NA	NA
Pcb- 1260	11096825	NA	NA	NA	NA	NA	NA
Total Petroleum Hydrocarbons (TPH) (mg/kg)							
DRO (C10-C28) Range	DRO	NA	NA	NA	NA	NA	NA